From: Miyoko Sakashita [mailto:miyoko@biologicaldiversity.org]
Sent: Tuesday, March 21, 2023 3:27 PM
To: CityClerk <CityClerk@longbeach.gov>
Subject: CBD Sources Part 1.4

-EXTERNAL-

Miyoko Sakashita

Oceans Director | Senior Counsel

Center for Biological Diversity
1212 Broadway, Suite 800
Oakland, CA 94612

tel. 510-844-7108 | miyoko@biologicaldiversity.org
@endangeredocean | Center for Biological Diversity

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

LEGAL OFFICE

801 K STREET • MS 24-03 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 323-6733 • **FAX** 916 / 445-9916 • **TDD** 916 / 324-2555 • **WEB SITE** conservation.ca.gov

December 1, 2011

Mr. David Siders
The Sacramento Bee
2100 Q Street
Sacramento, CA 95816

Dear Mr. Siders:

Pursuant to our recent telephone and email communications, enclosed please find a copy of what has previously been referred to as "the spill binder." The records comprising the binder are a non-exhaustive compilation of documents regarding surface expressions occurring in Kern County during 2011.

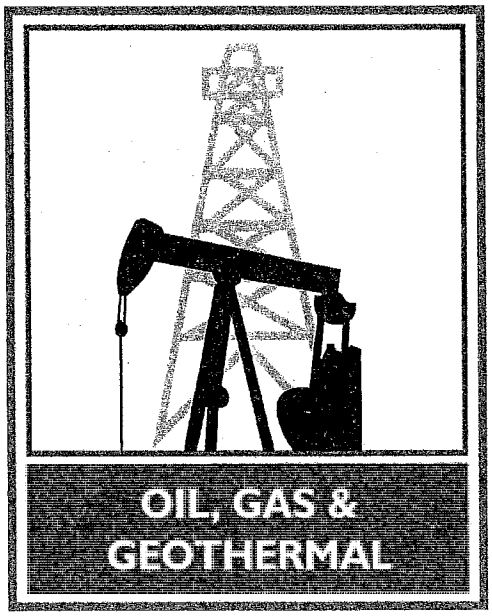
Please contact me at (916) 323-6733 if you have any questions regarding this correspondence.

Sincerely,

James Pierce
Senior Staff Counsel

Department of Conservation

Division of Oil, Gas, and Geothermal Resources



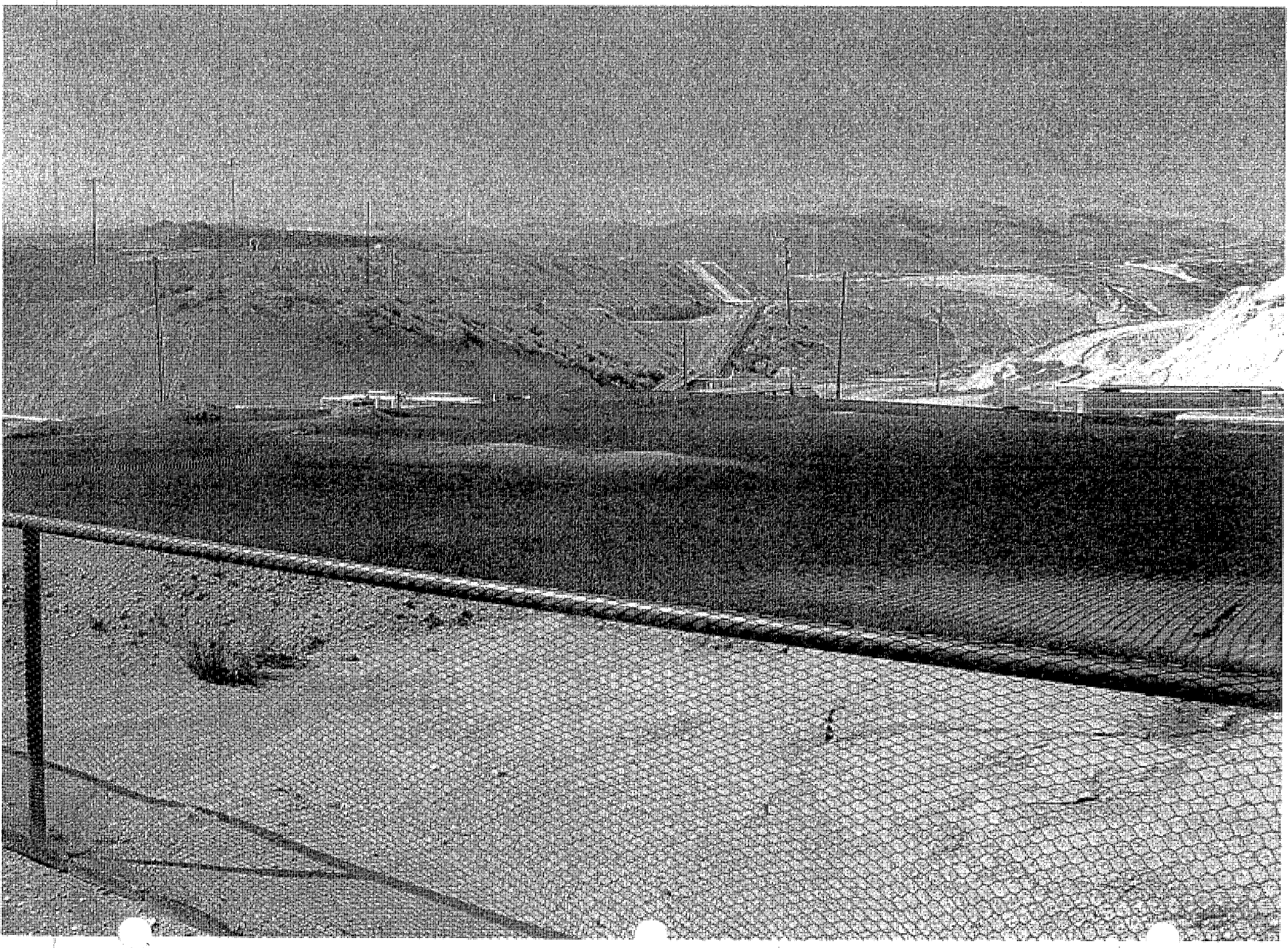
Reports of Occurrence

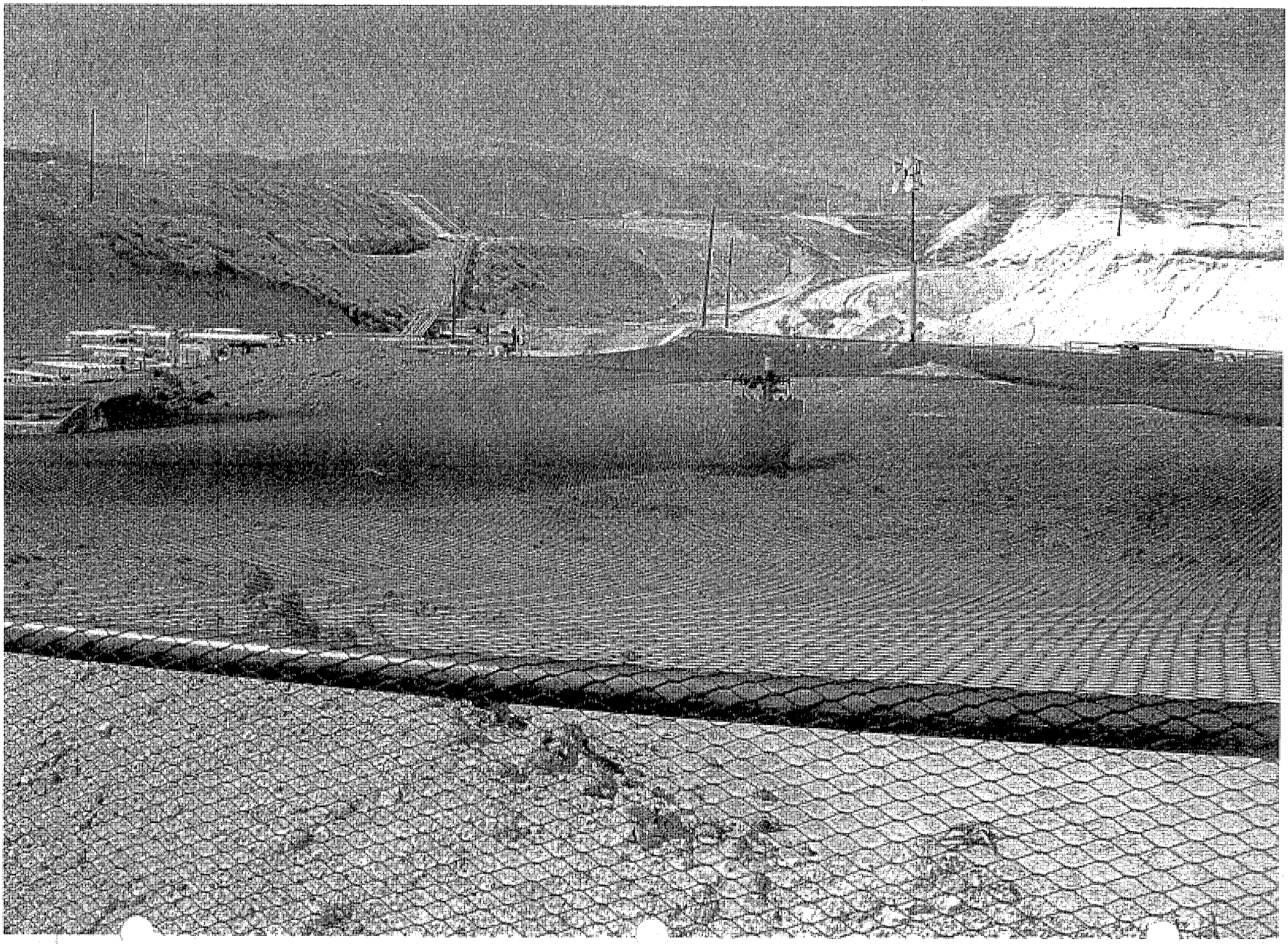
Surface Expressions in Bakersfield

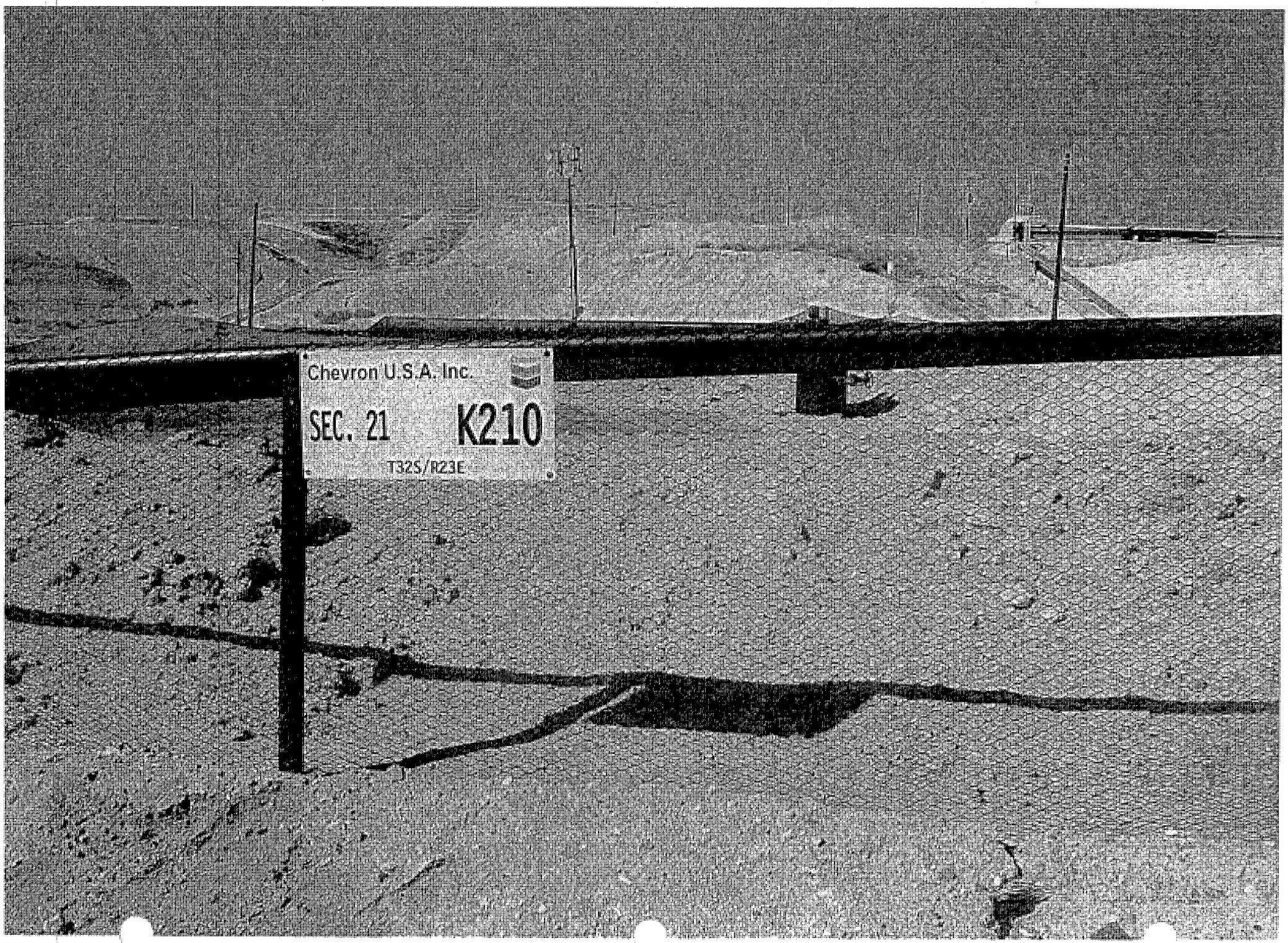
2011

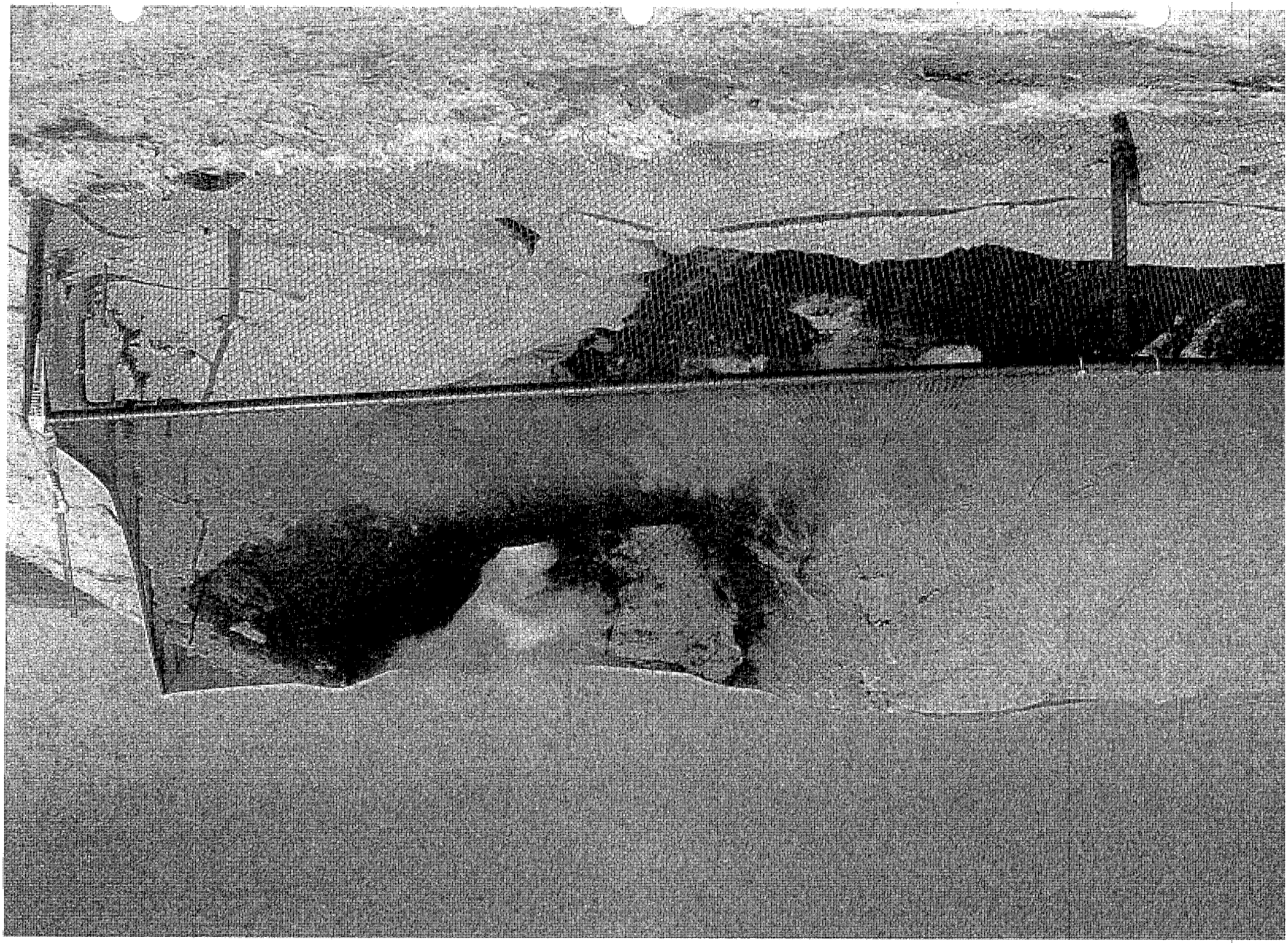
MIDWAY SUNSET

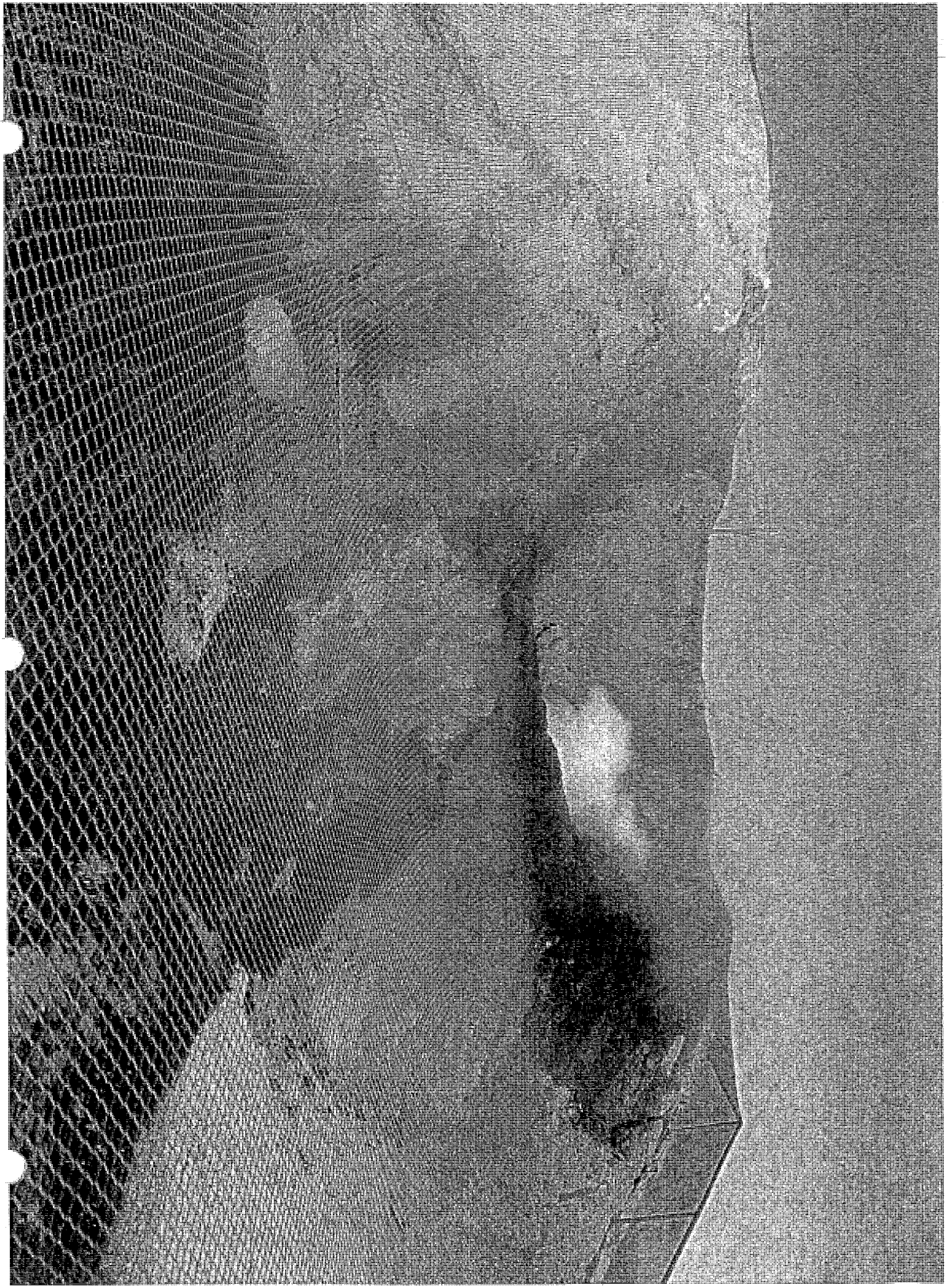
Chevron
6/21/11

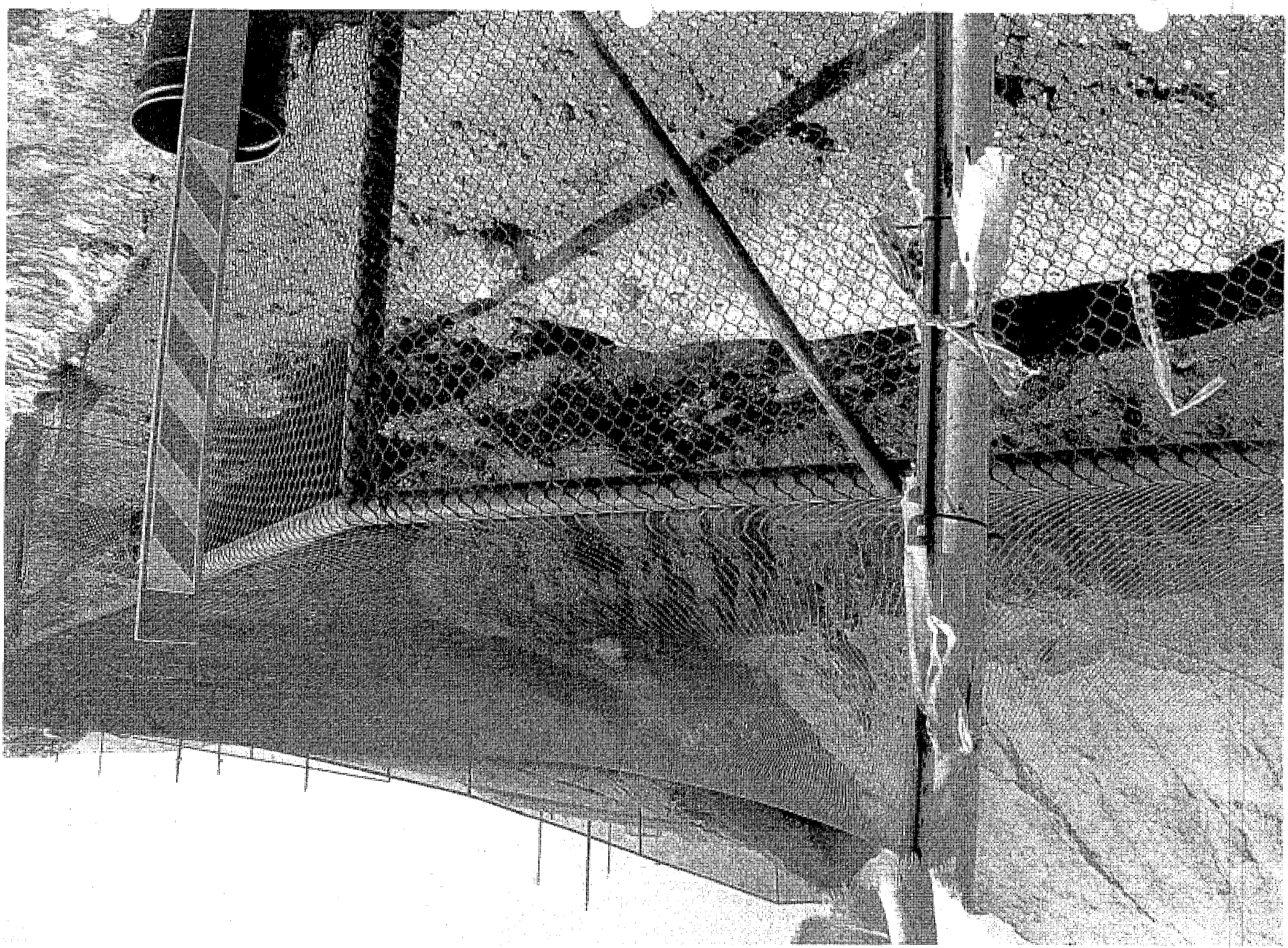





Chevron U.S.A. Inc.
SEC. 21
K210
T32S/R23E







Jorgenson, Heidi

From: Habel, Rob
Sent: Monday, August 29, 2011 11:58 AM
To: Jorgenson, Heidi
Subject: FW: Chevron - Surface Expression Containment Plans - GS #5 and Well #20
Attachments: Chevron GS #5 Containment.JPG; Chevron GS #5 Grading Plan.JPG; Chevron Well #20 Surface Containment M-S.JPG; Chevron Well #20 Containment Plan M-S.JPG

Heidi:

This is one of those pieces of data for the assignment.

Rob

From: Ellison, Burt
Sent: Thursday, July 28, 2011 1:22 PM
To: Pierce, James
Cc: Toland, Michael; Habel, Rob
Subject: FW: Chevron - Surface Expression Containment Plans - GS #5 and Well #20

James:

Here are the schematics of the Chevron Well 20 Surface Containment structure. The Chevron GS # 5 plans or for the SE in the Cymric field.

Please let me know if you need more information.

Sincerely,

Burton R. Ellison
Senior Oil and Gas Engineer
(661) 334-3674
(661) 861-0279 fax
bellison@consrv.ca.gov

From: Wermiel, Dan
Sent: Thursday, April 14, 2011 10:55 AM
To: Toland, Michael
Cc: Ellison, Burt
Subject: FW: Chevron - Surface Expression Containment Plans - GS #5 and Well #20

Here are the Chevron engineering plans for containment of surface expressions at the Well #20 at M-S and the GS #5 well at Cymric. The work at the Well #20 was completed by Chevron last week. I hope we can take at look at this on Monday. The work at GS #5 is expected to be completed this summer.

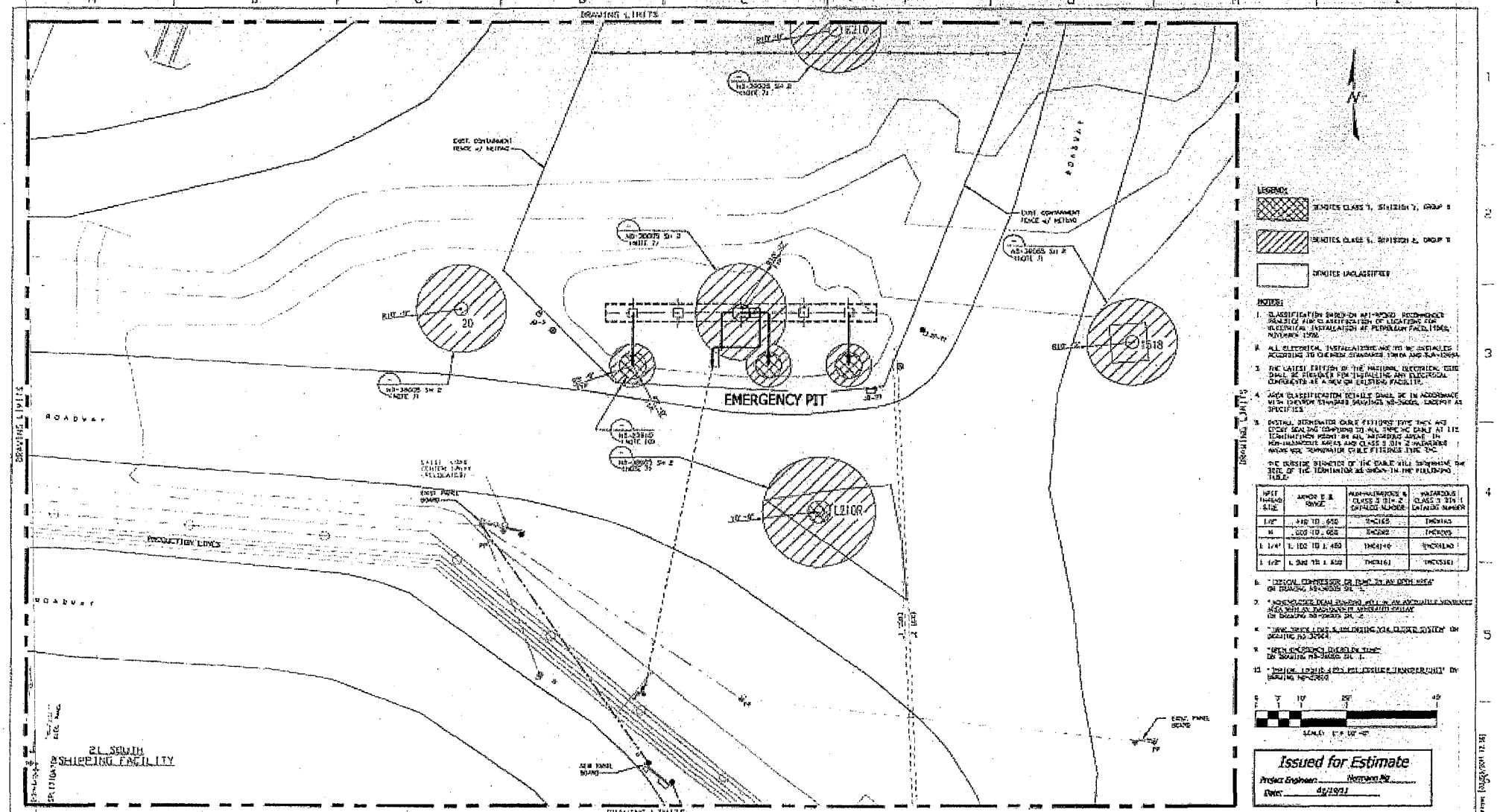
Thanks – Dan

From: Wermiel, Dan
Sent: Tuesday, March 22, 2011 4:25 PM

To: Miller, Elena; Habel, Rob; Kustic, Tim; Salera, Jerry
Cc: Adams, Randy
Subject: Chevron - Surface Expression Containment Plans - GS #5 and Well #20

These are the engineering schematics for containment of the surface expressions GS #5 at Cymric and Well #20 at Midway-Sunset. Please let me know if you have any questions.

Thanks – Dan



HAZARDOUS AREA CLASSIFICATION PLOT PLAN

SCALE: 1" = 10'-0"

REFERENCE DRAWINGS	REVISIONS					
	⊗ ISSUED FOR ESTIMATE/CONCEPT 02/09/11	MDP	MDE	◇		
	◇			◇		

Chevron North America Exploration and Production Company San Joaquin Valley Business Unit

DATE 02/09/11 DR. CLG. CH. ENGR.

SCALE 1"=10'-0" DR. MDP CH. ENGR.

APPROVED	SE - HAZARDOUS AREA CLASSIFICATION PLAN			
	WELL 20 SURFACE EXPRESSION FLUIDS PLAN			
E.C.	SECTION 21 WELL 20			
SYSTEM 361	MIDWAY SUNSET AREA T32S/R23E SECTION 21S	UNIT	DP	REV
	ND-71887	1	1	A

TENCATE
Mirafi®

Mirafi® RS580i

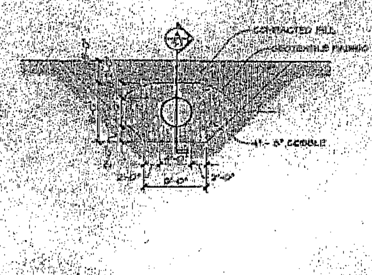
This is to certify that Mirafi® RS580i is a revolutionary geotextile created from super high-tenacity polypropylene filaments formed into an innovative weave to provide superior reinforcement strength and soil interaction integrated with high water flow and soil retention capabilities.

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value
STRENGTH			
Tensile Modulus @ 2% strain (CD)	ASTM D 4595	kN/m (lbs/ft)	1,313 (90,000)
HYDRAULIC			
Flow Rate	ASTM D 4491	l/min/m² (gal/min/ft²)	3,055 (75)
Permittivity	ASTM D 4491	sec⁻¹	1.0
SOIL RETENTION			
Apparent Opening Size (AOS)[1]	ASTM D 4751	mm (U.S. Sieve)	0.43 (40)
SOIL INTERACTION			
Interaction Coefficient[2]	ASTM D 5321	---	0.9
Factory Seam Strength	ASTM D 4884	kN/m (lbs/ft)	43.8 (3,000)
UV Resistance (at 500 hours)	ASTM D 4355	% strength retained	80

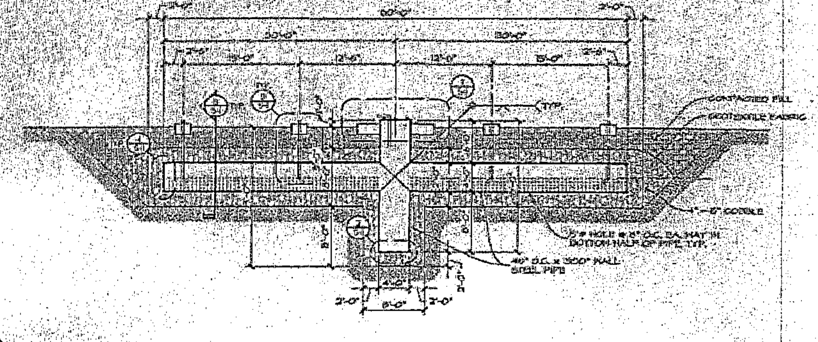
[1] ASTM D 4751: AOS is a Maximum Opening Diameter Value
[2] Interaction Coefficient value is for sand or gravel

Physical Properties	Unit	Typical Value
Roll Dimensions (width x length)	m (ft)	4.5 (15) x 91 (300)
Roll Area	m² (yd²)	418 (500)
Estimated Roll Weight	kg (lbs)	188 (415)

TENCATE



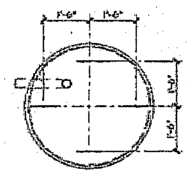
(B) SECTION 1/8" = 1'-0"



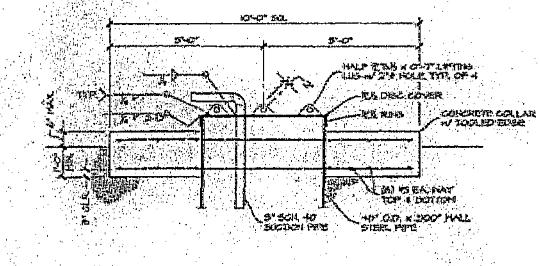
(A) SECTION 1/8" = 1'-0"

GENERAL NOTES

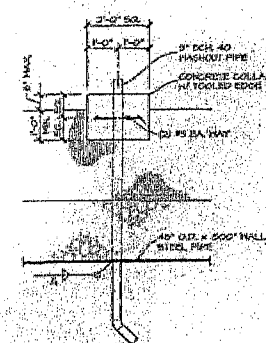
[illegible]

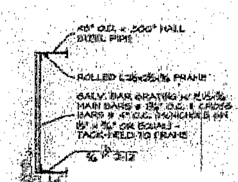


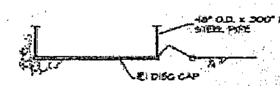
LID PLAN



(1) DETAIL 1/2" = 1'-0"





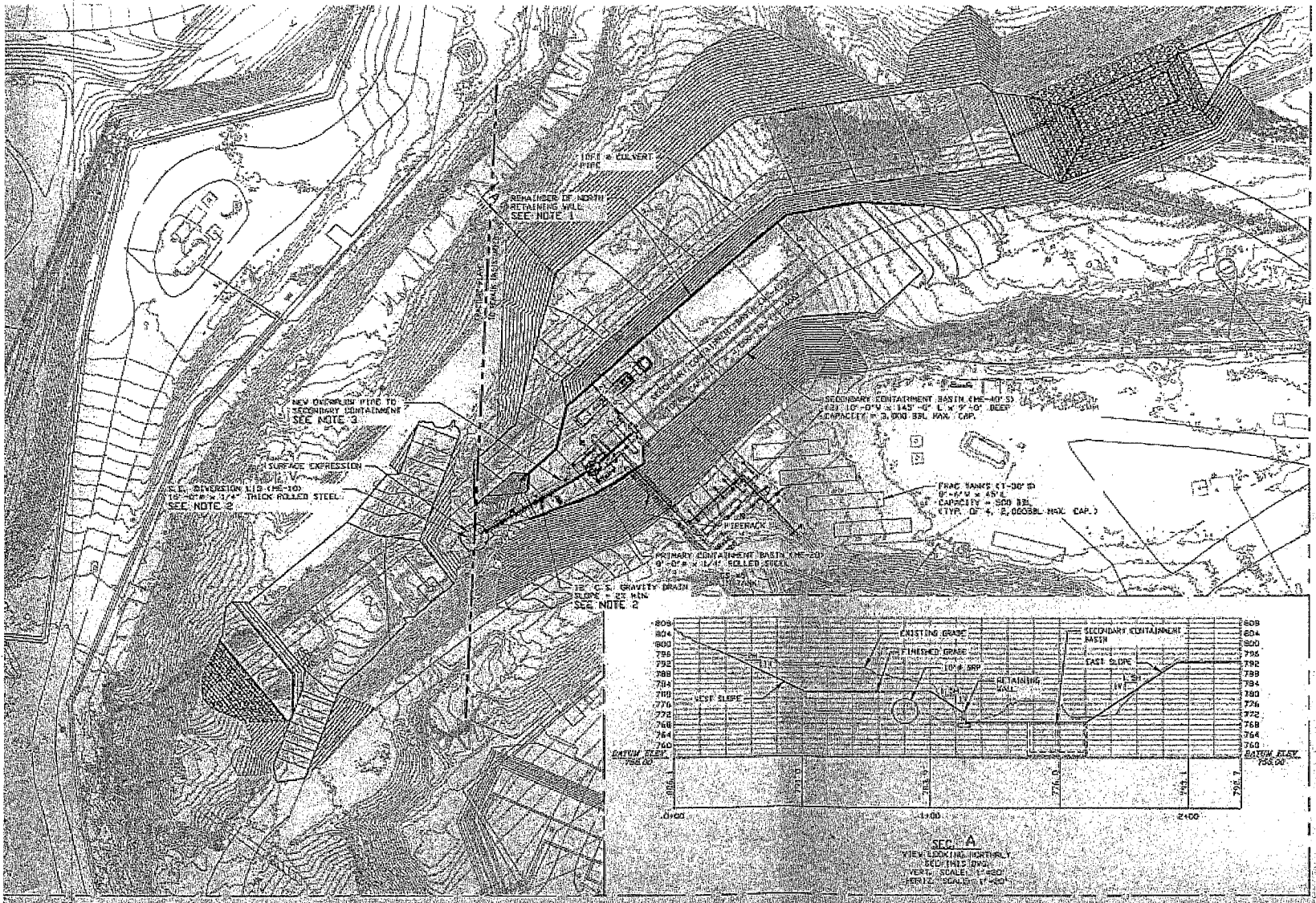


(4) DETAIL 1/2" = 1'-0"

(3) DETAIL 1/2" = 1'-0"

(2) DETAIL 1/2" = 1'-0"

DATE	ISSUED FOR	ENGEL & COMPANY Engineers 4005 UNION AVENUE BAKERSFIELD, CA 93305 www.engelengineers.com (661) 327-7028		Sections & Details Seeping Oil Culvert Chevron Midway Field California	S-1



SEC. A
VIEW LOOKING NORTHERLY
SECTIONS SHOWN
VERT. SCALE: 1"=5'
HORIZ. SCALE: 1"=50'

EARTHWORK VOLUMES:

EXCAVATION QUANTITIES:

CUT (CU. YDS.)	+43
FILL* (CU. YDS.)	-7,695
NET (CU. YDS.)	-7,652

* INCLUDES 30% SHRINKAGE

STAGE 5 ACTIVITY

1. BUILD REMAINDER OF WEST RETAINING WALL. BACKFILL BETWEEN 10FT CULVERT AND WEST RETAINING WALL.
2. INSTALL ME-10 & PIPING.
3. GRAVITY FLOW INTO INTO SECONDARY CONCRETE CONTAINMENT BASINS. .

PRELIMINARY NOT FOR CONSTRUCTION

NOTES:

1. THIS PLAN GENERATED FROM AERIAL SURVEY INFORMATION AS PROVIDED BY AERIAL PHOTOMAPPING SERVICES, INC. THEIR JOB/FILENAME – MP08005/SSC-1y.dwg DATED FEB. 15, 2008 AND LASER TOPO SURVEY AS PROVIDED BY SOILS ENGINEERING INC. THEIR JOB/FILENAME – 13468/13468-CHEVRON GS#5 CONTAINMENT TOPO REV1.dwg DATED DEC. 03, 2010. . THIS SURVEY COLLECTED IN THE NAD83, ZONE 5, STATE PLANE COORDINATE SYSTEM.

EXISTING GRADE CONTOUR INTERVAL = 2'-0"

GRAPHIC SCALE

0 20 40 80 120

(IN FEET)

1 inch = 20 ft.

REFERENCE DRAWINGS

CONSTRUCTION SEQUENCING PLAN – STAGE 4 SK-CSP5364

REVISIONS

1	ISSUED FOR REVIEW	12/21/11	TJW
2	RE-ISSUED FOR REVIEW	03/21/12	TJW

TJCROSS ENGINEERING, INC.

Chevron SAN JOAQUIN VALLEY BUSINESS UNIT

APPROVED

CONSTRUCTION SEQUENCING PLAN – STAGE 5

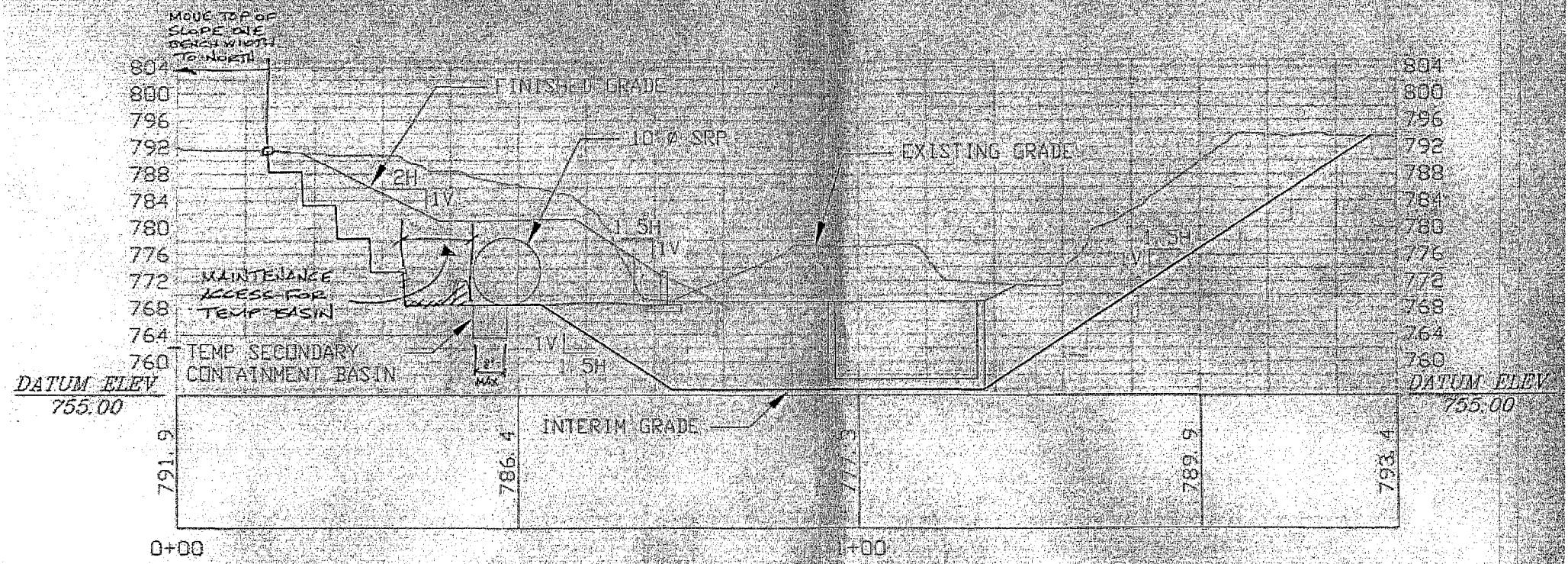
GS#5 SSC CONTAINMENT

GAUGE SETTING: 85

GYMRIC FIELD T29S/R21E SECTION: 36W

03/21/12 TJW

SC-10393-
4/6 3/11/



SEC. A

VIEW LOOKING NORTHERLY
SEE THIS DWG.
VERT. SCALE 1"=20'
HORIZ. SCALE 1"=20'

San Joaquin Valley SBU
Chevron North America
Exploration and Production
9525 Camino Media
Bakersfield, CA 93311
661-319-4742
DallasTubbs@chevron.com

Thursday, June 30, 2011

Mr. Burt Ellison
4800 Stockdale Hwy., Suite 417
Bakersfield, CA 93309-0279

RE: Your E-mail Dated 6/20/2011
API 04-029-23672; MWSS 21S Well #20

Dear Mr. Ellison,

As requested, please find attached, tilt-meter reports for the 10 days preceding the July 21st incident. Also included are tilt-meter reports for events which have been observed since July 21st. Pertinent data, including date and time of the event are recorded on these reports.

Please note that the Pinnacle sheets contain their own interpretation of source wells. These are not Chevron interpretations.

Chevron requests that this information be held confidential by the Division of Oil, Gas and Geothermal Resources.

Best Regards,

Dallas H. Tubbs
Lead Petroleum Engineer
Temblor Thermal Area

MWSS EVENT LOCATOR

EVENT START: 06/13/11 9:25 hrs
EVENT END: 06/14/11 9:30 hrs

Event Fracture Parameters

Depth = 420 ft. Top Diatomite = 378 ft Difference = -42 ft
Error Bounds = 360' to 465'
Fracture Strike Azimuth = 212 deg.
Fracture Dip = 33 deg. NW
Estimated Fracture Diameter = 115 ft.

Growth Center Coordinates

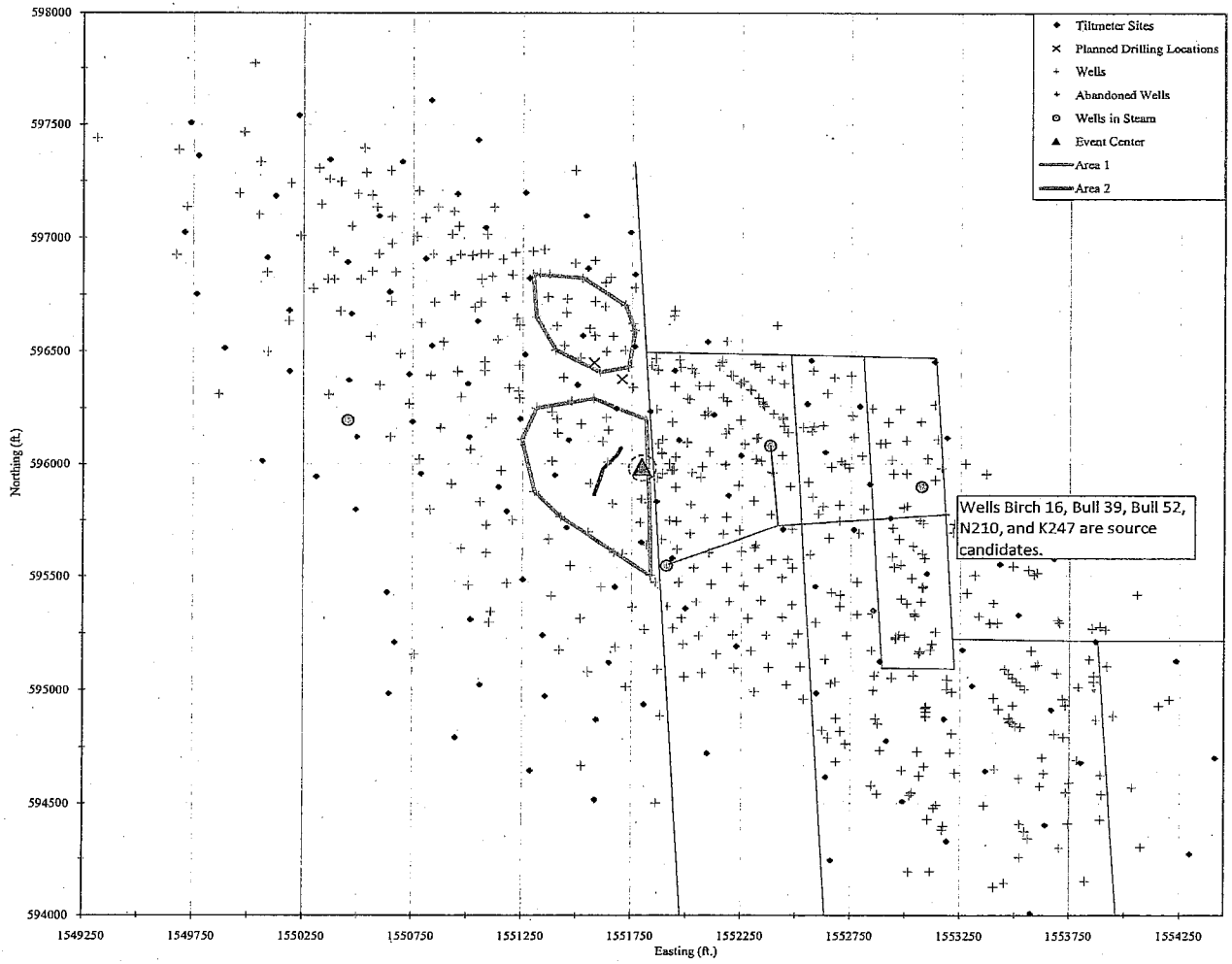
NAD27 Easting = 1551795 Northing = 595985
NAD83 Easting = 6113187 Northing = 2236411

Nearest Wells		Nearest Abandoned Wells	
Well	Dist. (ft)	Well	Dist. (ft)
202R	13	0	0
Bull 16R2	86	0	0
Bull 16R	97	0	0
Birch 8	109	0	0
Birch 8-1	111	0	0
Birch 13	127	0	0

Wells Switched To Soak					
Well	Dist. (ft)	Well	Dist. (ft)	Well	Dist. (ft)
Bull 52	454	289	1359		
Bull 25	593				
Cypress 41	1280				

Planned Drilling Locations			
Well	Dist. (ft)	Well	Dist. (ft)
H220	401	0	0
H232	513	0	0
0	0	0	0

Notes:
According to daily injection information, this event began two days after the steam start times for TRC wells Bull 52 and Bull 25. Bull 25 was removed from steam shortly prior to event termination and well Bull 52 was removed from steam shortly after event termination. Both wells remain as source candidates. This analysis supersedes previously reported results.



MWSS EVENT LOCATOR

EVENT START: 06/17/11 9:00 hrs
EVENT END: 06/19/11 8:50 hrs

Event Fracture Parameters

Depth = 1020 ft. Top Diatomite = 779 ft Difference = -241 ft
Error Bounds = 970' to 1110'
Fracture Strike Azimuth = 266 deg.
Fracture Dip = 8 deg. NW
Estimated Fracture Diameter = 360 ft.

Growth Center Coordinates

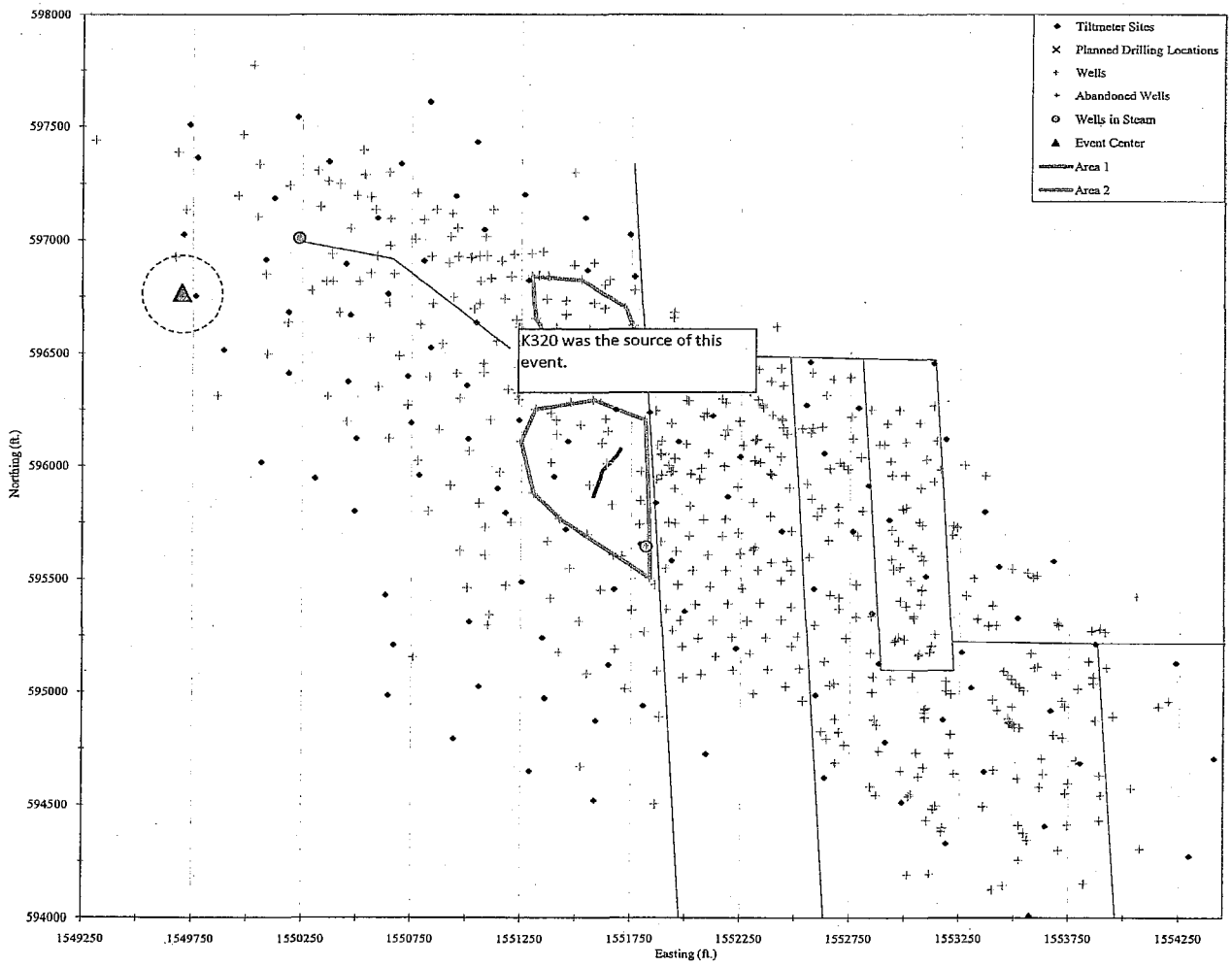
NAD27 Easting = 1549703 Northing = 596768
NAD83 Easting = 6111094 Northing = 2237193

Nearest Wells		Nearest Abandoned Wells	
Well	Dist. (ft)	Well	Dist. (ft)
427	160	0	0
L350	370	0	0
L320	390	0	0
N310	471	0	0
K330	480	0	0
525	485	0	0

Wells On Steam					
Well	Dist. (ft)	Well	Dist. (ft)	Well	Dist. (ft)
K320	585				
L200	2397				

Planned Drilling Locations			
Well	Dist. (ft)	Well	Dist. (ft)
0	0	0	0
0	0	0	0
0	0	0	0

Notes:
This event began and ended concurrently with the steam start and soak times for nearby well K320. This well was therefore the source of this event. This report supersedes previously reported results.



MWSS EVENT LOCATOR

EVENT START: 06/18/11 9:30 hrs
EVENT END: 06/19/11 15:35 hrs

Event Fracture Parameters

Depth = 605 ft. Top Diatomite = 540 ft Difference = -65 ft
Error Bounds = 560' to 660'
Fracture Strike Azimuth = 179 deg.
Fracture Dip = 18 deg. SW
Estimated Fracture Diameter = 140 ft.

Growth Center Coordinates

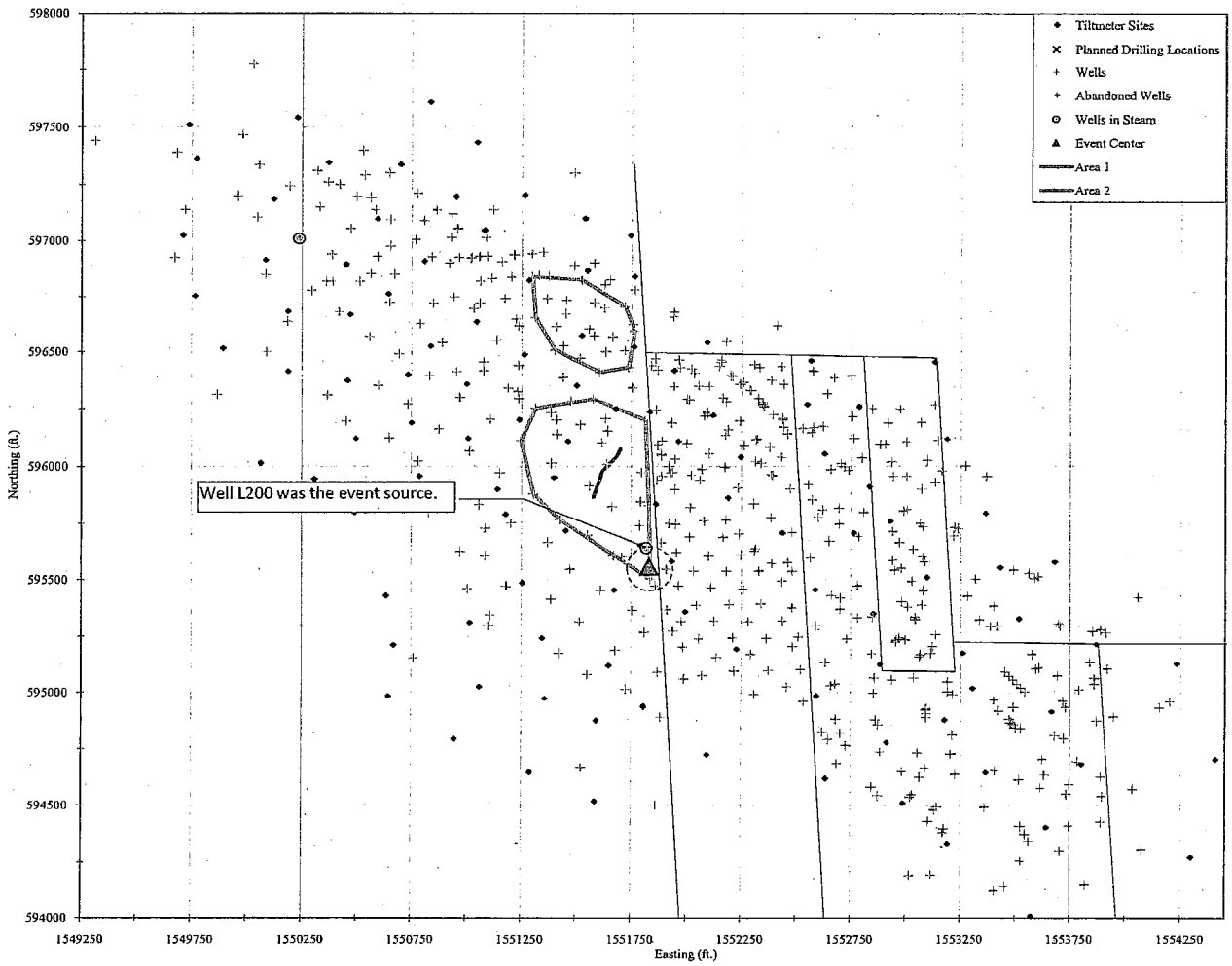
NAD27 Easting = 1551831 Northing = 595558
NAD83 Easting = 6113223 Northing = 2235984

Nearest Wells		Nearest Abandoned Wells	
Well	Dist. (ft)	Well	Dist. (ft)
M190	56	0	0
Bull 52	79	0	0
L200	84	0	0
31	89	0	0
Bull 45	120	0	0
M200	130	0	0

Wells Switched To Soak					
Well	Dist. (ft)	Well	Dist. (ft)	Well	Dist. (ft)
L200	84				
K320	2156				

Planned Drilling Locations			
Well	Dist. (ft)	Well	Dist. (ft)
0	0	0	0
0	0	0	0
0	0	0	0

Notes:
Event 2011/06/18A terminated at 15:35 hrs on June 19, 2011, concurrent with the steam end time of nearby well L200. This well was the event source. This report supersedes previously reported results.



MWSS EVENT LOCATOR

EVENT START: 06/20/11 18:00 hrs
EVENT END: 06/21/11 1:30 hrs

Event Fracture Parameters
Depth = 50 ft. Top Diatomite = 277 ft Difference = +227 ft
Fracture Strike Azimuth = 67 deg.
Fracture Dip = 3 deg. SE
Estimated Fracture Diameter = 250 ft.

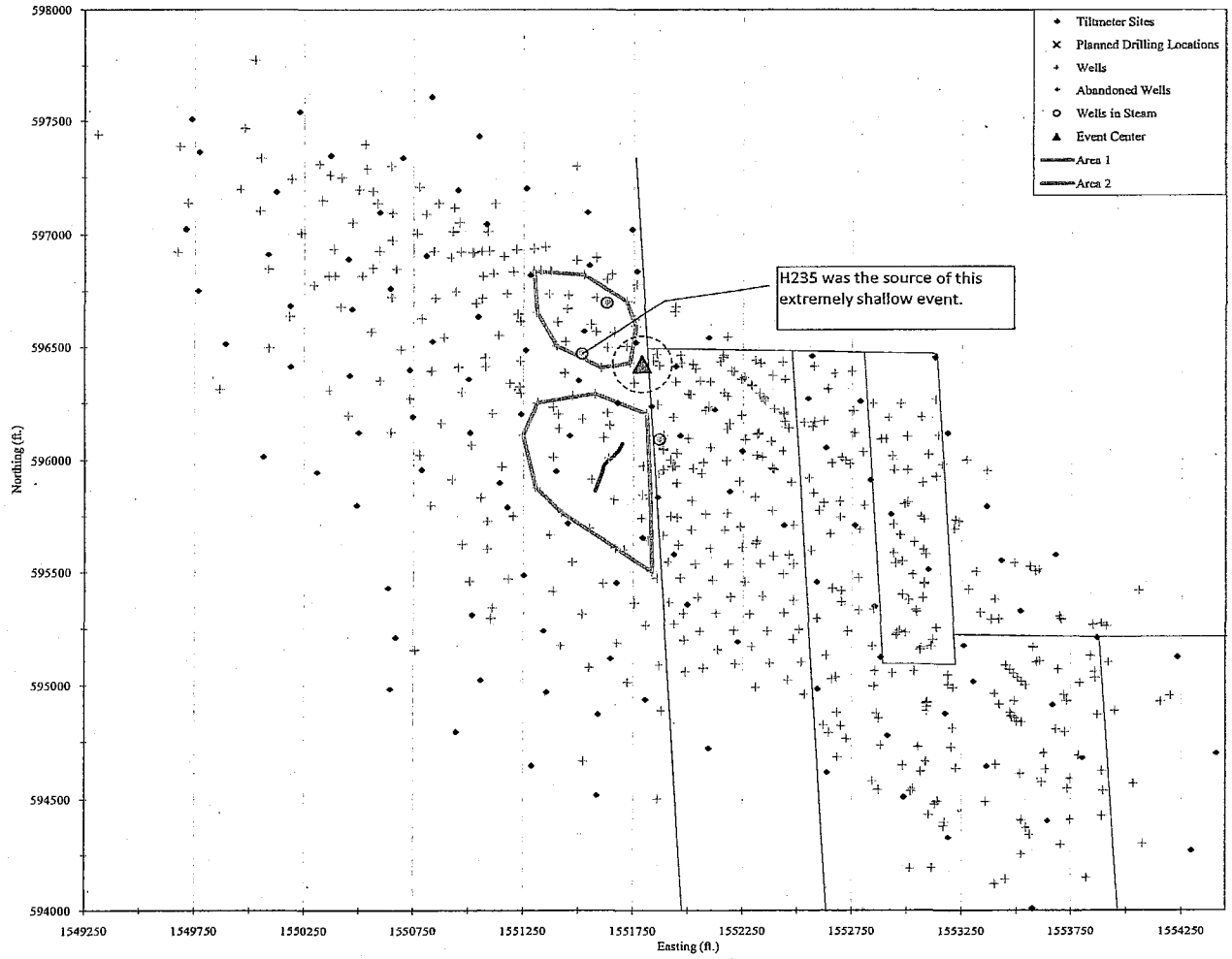
Growth Center Coordinates
NAD27 Easting = 1551790 Northing = 596425
NAD83 Easting = 6113181 Northing = 2236850

Nearest Wells		Nearest Abandoned Wells	
Well	Dist. (ft)	Well	Dist. (ft)
Bull 31	52	0	0
Bull 31ST1	52	0	0
H225	55	0	0
Bull 10	79	0	0
Bull 31R	81	0	0
204R	93	0	0

Wells On Steam					
Well	Dist. (ft)	Well	Dist. (ft)	Well	Dist. (ft)
H235	278				
G240	317				
Birch 8R2	344				

Planned Drilling Locations			
Well	Dist. (ft)	Well	Dist. (ft)
0	0	0	0
0	0	0	0
0	0	0	0

Notes:
Event termination was observed at 1:25 AM on June 21, 2011. Presumably, no steam changes took place at this time. A re-inflation of this event occurred at 7:55 AM with ultimate termination at 8:50 AM. This time correlates to the removal of H235 from steam. This well remains the best candidate as the source of this event. Chevron well G240 and TRC Birch-8R2 remain possible contributors to event growth. This report supersedes previously reported results.



MWSS EVENT LOCATOR

EVENT START: 06/22/11 13:45 hrs
EVENT END: 06/24/11 14:30 hrs

Event Fracture Parameters
Depth = 275 ft.
Error Bounds = 260' to 305'
Fracture Strike Azimuth = 68 deg.
Fracture Dip = 18 deg. SE
Estimated Fracture Diameter = 160 ft.

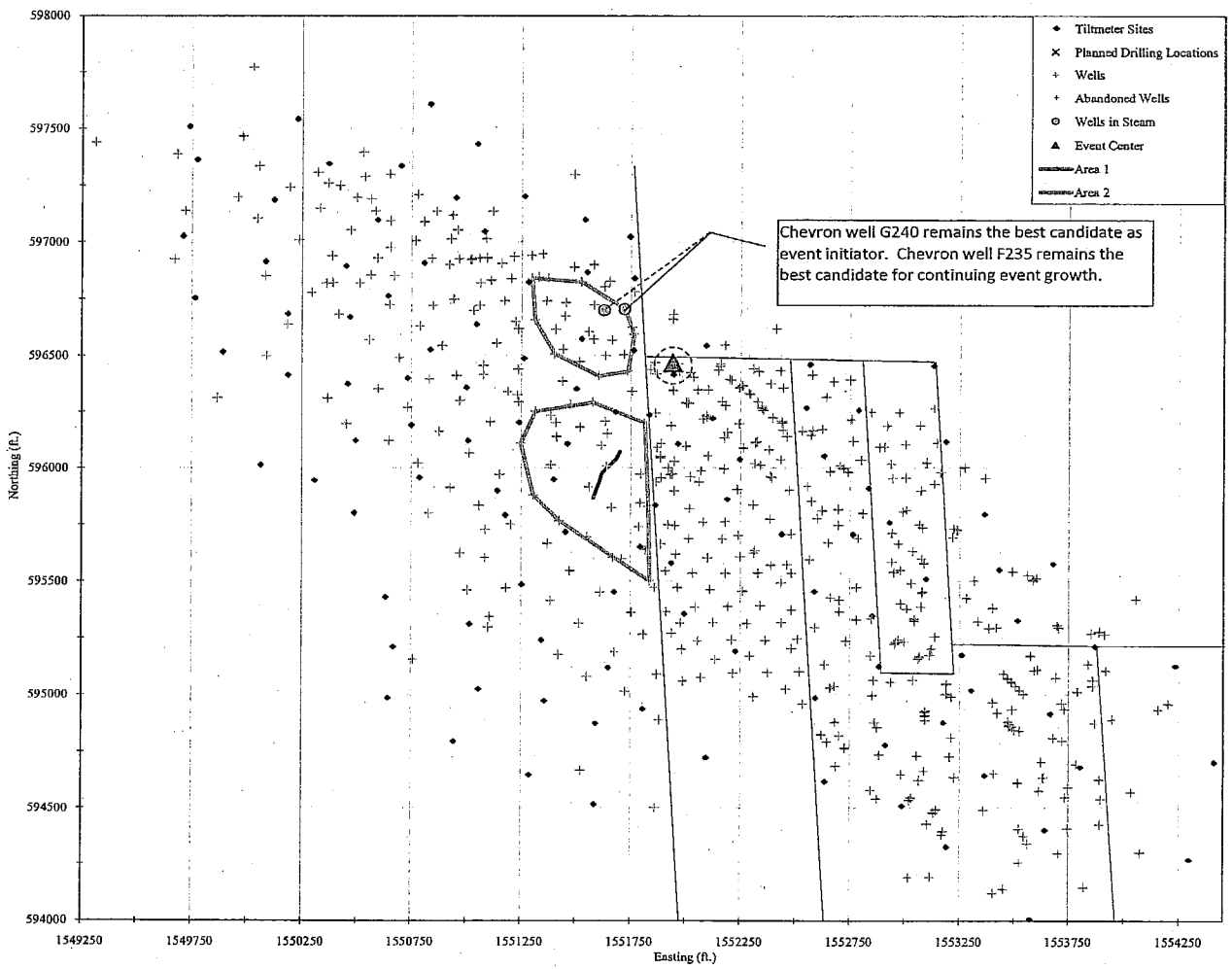
Growth Center Coordinates
NAD27 Easting = 1551942 Northing = 596466
NAD83 Easting = 6113334 Northing = 2236892

Nearest Wells		Nearest Abandoned Wells	
Well	Dist. (ft)	Well	Dist. (ft)
Bull 30R	25	0	0
Bull 30	48	0	0
Bull 31R	83	0	0
Bull 10	88	0	0
Bull 29	91	0	0
Bull 29ST1	91	0	0

Wells On Steam					
Well	Dist. (ft)	Well	Dist. (ft)	Well	Dist. (ft)
F235	324				
G240	390				

Planned Drilling Locations			
Well	Dist. (ft)	Well	Dist. (ft)
0	0	0	0
0	0	0	0
0	0	0	0

Notes:
According to daily injection information, this event began two days after the steam start time for Chevron well G240. This well was removed from steam on 6/23 and remains the best candidate as event initiator. Chevron well F235 was switched into steam on 6/23 and was removed from steam on 6/26. This well remains the best candidate for continuing event growth. This analysis supersedes previously reported results.



MWSS EVENT LOCATOR

EVENT START: 06/24/11 14:30 hrs
EVENT END: 06/26/11 9:55 hrs

Event Fracture Parameters

Depth = 675 ft. Top Diatomite = 356 ft Difference = -319 ft
Error Bounds = 605' to 785'
Fracture Strike Azimuth = 187 deg.
Fracture Dip = 19 deg. NW
Estimated Fracture Diameter = 195 ft.

Growth Center Coordinates

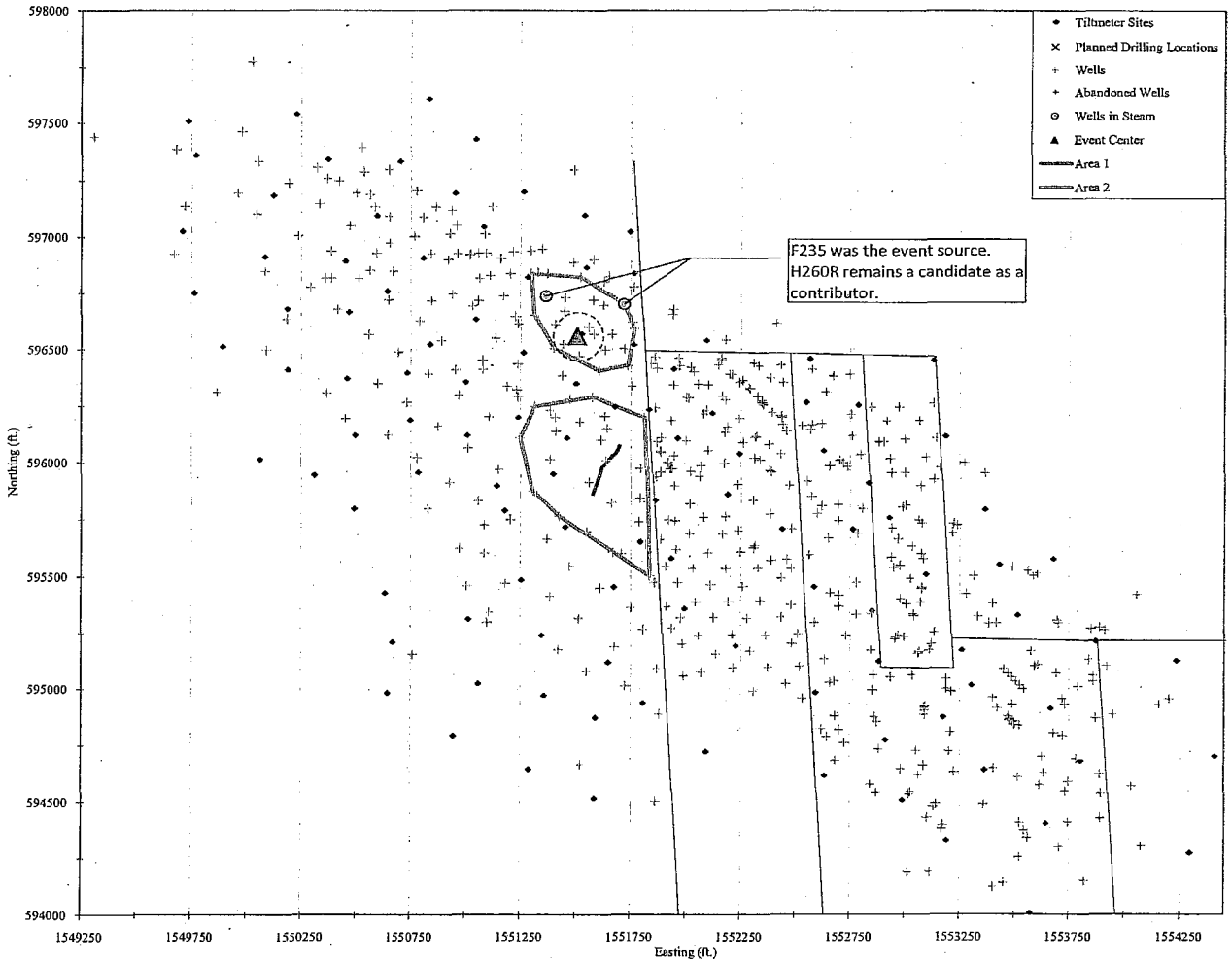
NAD27 Easting = 1551505 Northing = 596561
NAD83 Easting = 6112896 Northing = 2236986

Nearest Wells		Nearest Abandoned Wells	
Well	Dist. (ft)	Well	Dist. (ft)
H240R	66	0	0
224R	73	0	0
H240	76	0	0
H235	91	0	0
H250R	111	0	0
224	117	0	0

Wells On Steam					
Well	Dist. (ft)	Well	Dist. (ft)	Well	Dist. (ft)
H260R	226				
F235	257				

Planned Drilling Locations			
Well	Dist. (ft)	Well	Dist. (ft)
0	0	0	0
0	0	0	0
0	0	0	0

Notes:
This event began one day after nearby Chevron well F235 was switched into steam and ended concurrently with the soak time for this well. F235 was therefore the source of this event. H260R remains a candidate as a contributor to event growth. This report supersedes previously reported results.



MWSS EVENT LOCATOR

EVENT START: 06/26/11 9:45 hrs
EVENT END: 06/27/11 15:30 hrs

Event Fracture Parameters

Depth = 880 ft. Top Diatomite = 811 ft Difference = -69 ft
Error Bounds = 820' to 950'
Fracture Strike Azimuth = 63 deg.
Fracture Dip = 19 deg. SE
Estimated Fracture Diameter = 205 ft.

Growth Center Coordinates

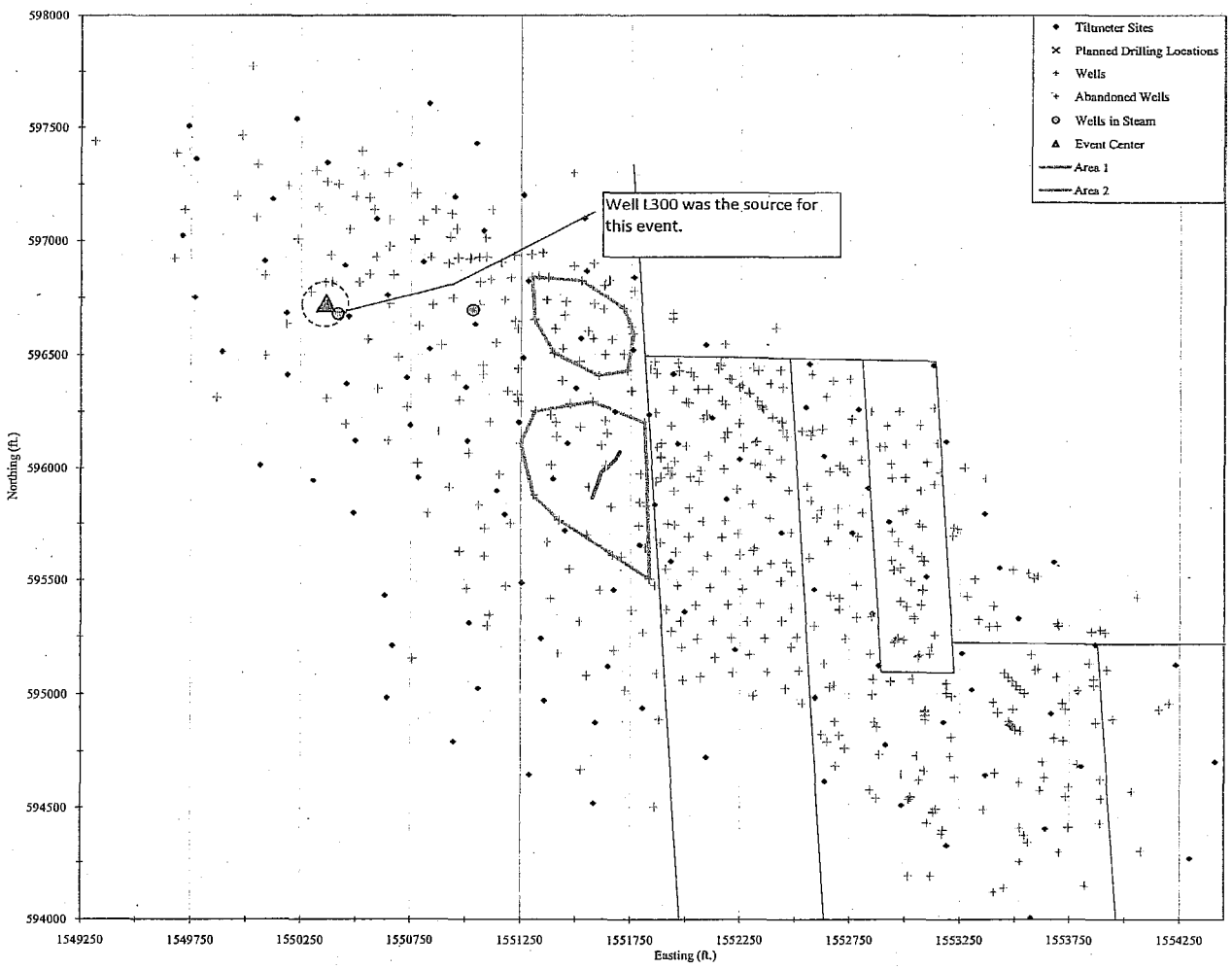
NAD27 Easting = 1550363 Northing = 596725
NAD83 Easting = 6111755 Northing = 2237151

Nearest Wells		Nearest Abandoned Wells	
Well	Dist. (ft)	Well	Dist. (ft)
L300	71	0	0
L310	86	0	0
L305	93	0	0
282	98	0	0
K300	176	0	0
M310	199	0	0

Wells Switched To Soak					
Well	Dist. (ft)	Well	Dist. (ft)	Well	Dist. (ft)
L300	71				
J270	672				

Planned Drilling Locations			
Well	Dist. (ft)	Well	Dist. (ft)
0	0	0	0
0	0	0	0
0	0	0	0

Notes:
According to daily injection information, this event began shortly after nearby Chevron well L300 was put into steam and ended concurrent to the soak time for this well. Therefore, well L300 was there source for this event. This analysis supersedes previously reported results.



Jorgenson, Heidi

From: Habel, Rob
Sent: Monday, August 29, 2011 11:57 AM
To: Jorgenson, Heidi
Subject: FW: Chevron's surface expression near well 20
Attachments: County of Kern Public Online Mapping.pdf

Heidi:

This is one of those pieces of data for the assignment.

Rob

From: Ellison, Burt
Sent: Wednesday, July 06, 2011 11:41 AM
To: Habel, Rob
Cc: Toland, Michael
Subject: RE: Chevron's surface expression near well 20

Rob:

I researched our records/database as well as old aerial photos to determine the age of the SE at well 20. Here is what I found:

1) DOGGR's first inspection was done on 2-16-10 by S, Nasiatka.
2) Spill report by CUSA of a surface expression on 9-27-2010 . Spill report taken by A. Lagunzad.
3) A review of aerial photos from Kern County's GIS site show the SE to be present in 2008 photos (see attached) but not in the 2006 photos.

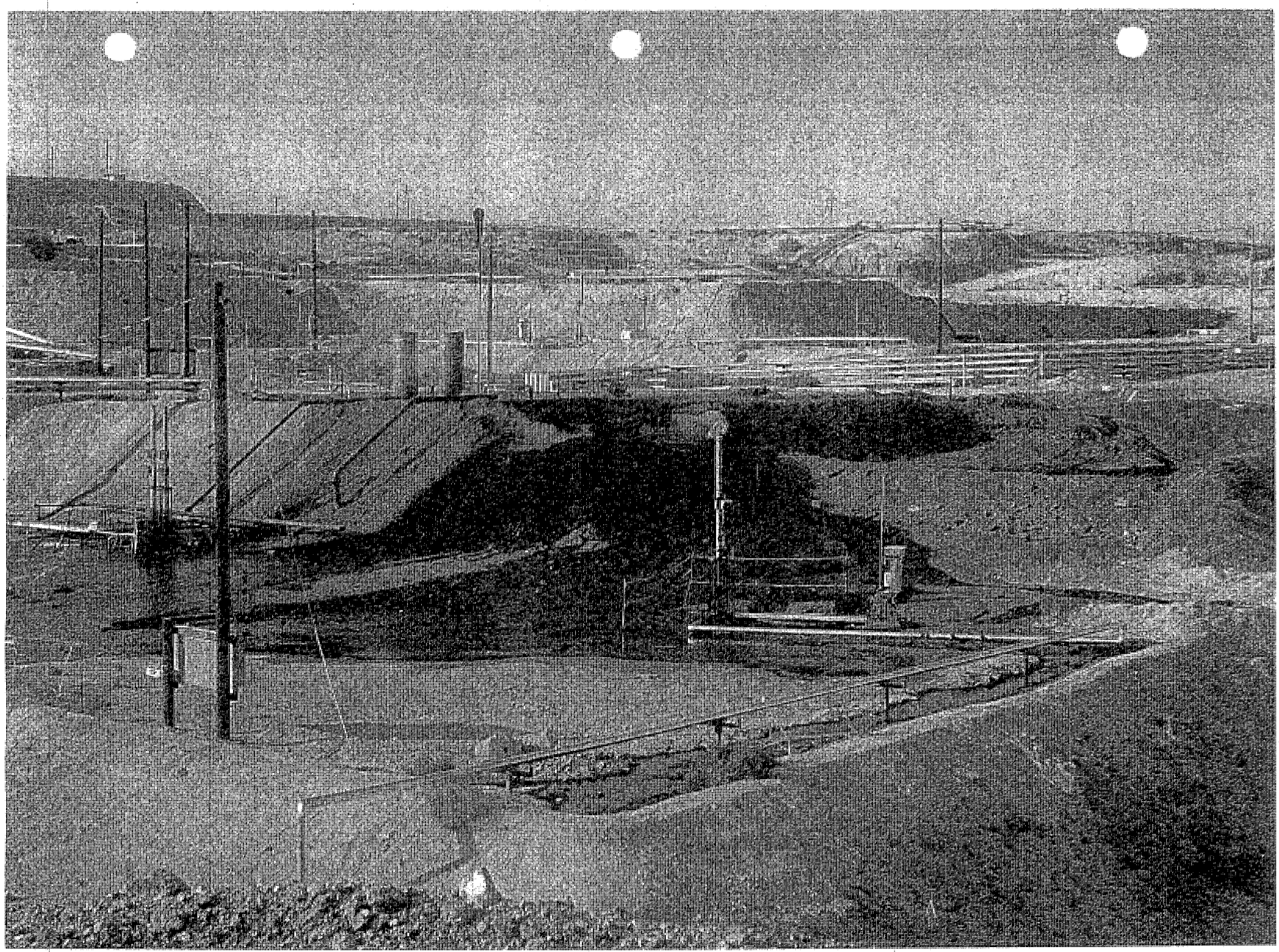
From what I can tell, the SE at well 20 is at least 4 years old.

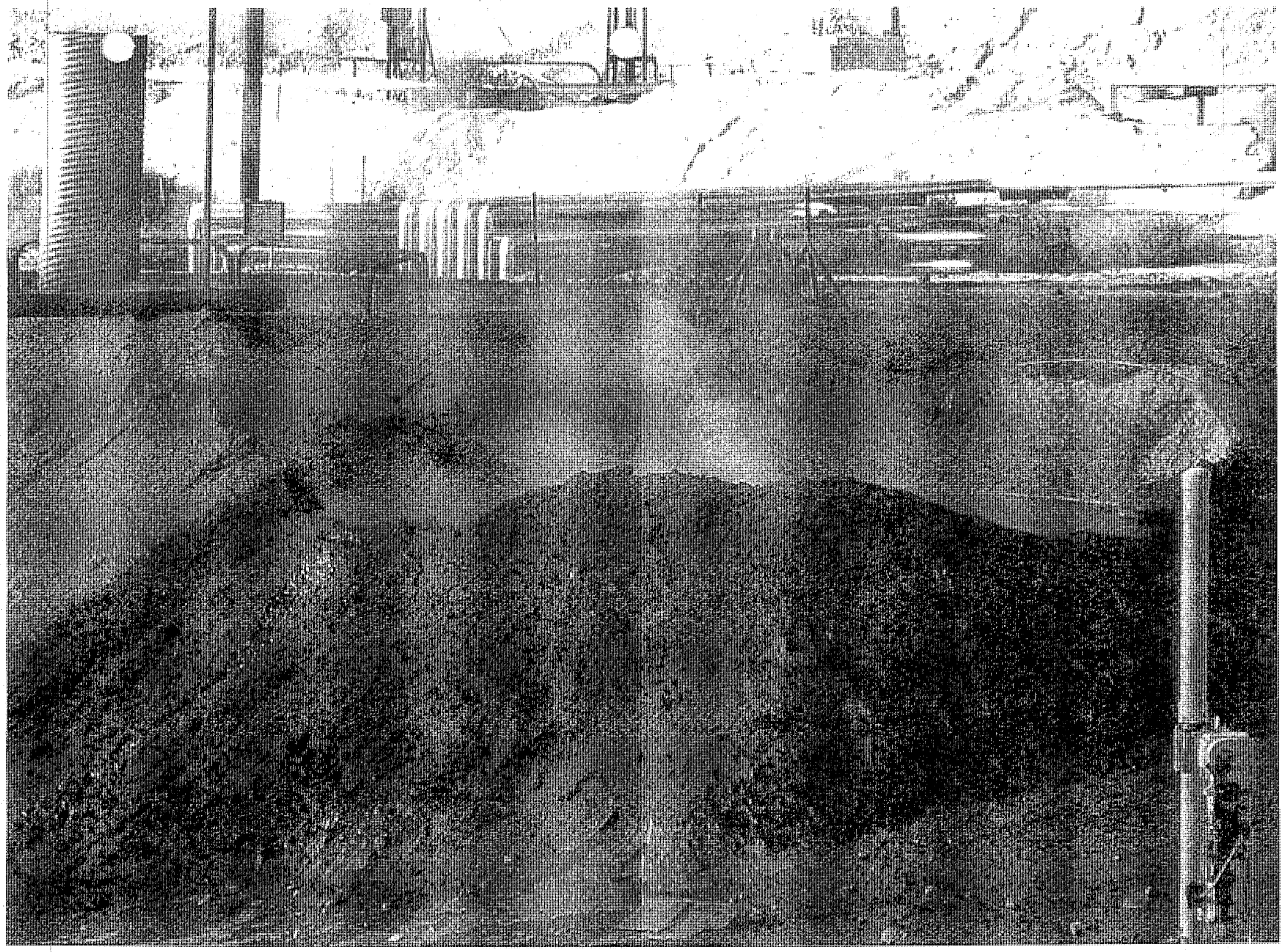
Please let me know if you need more information.

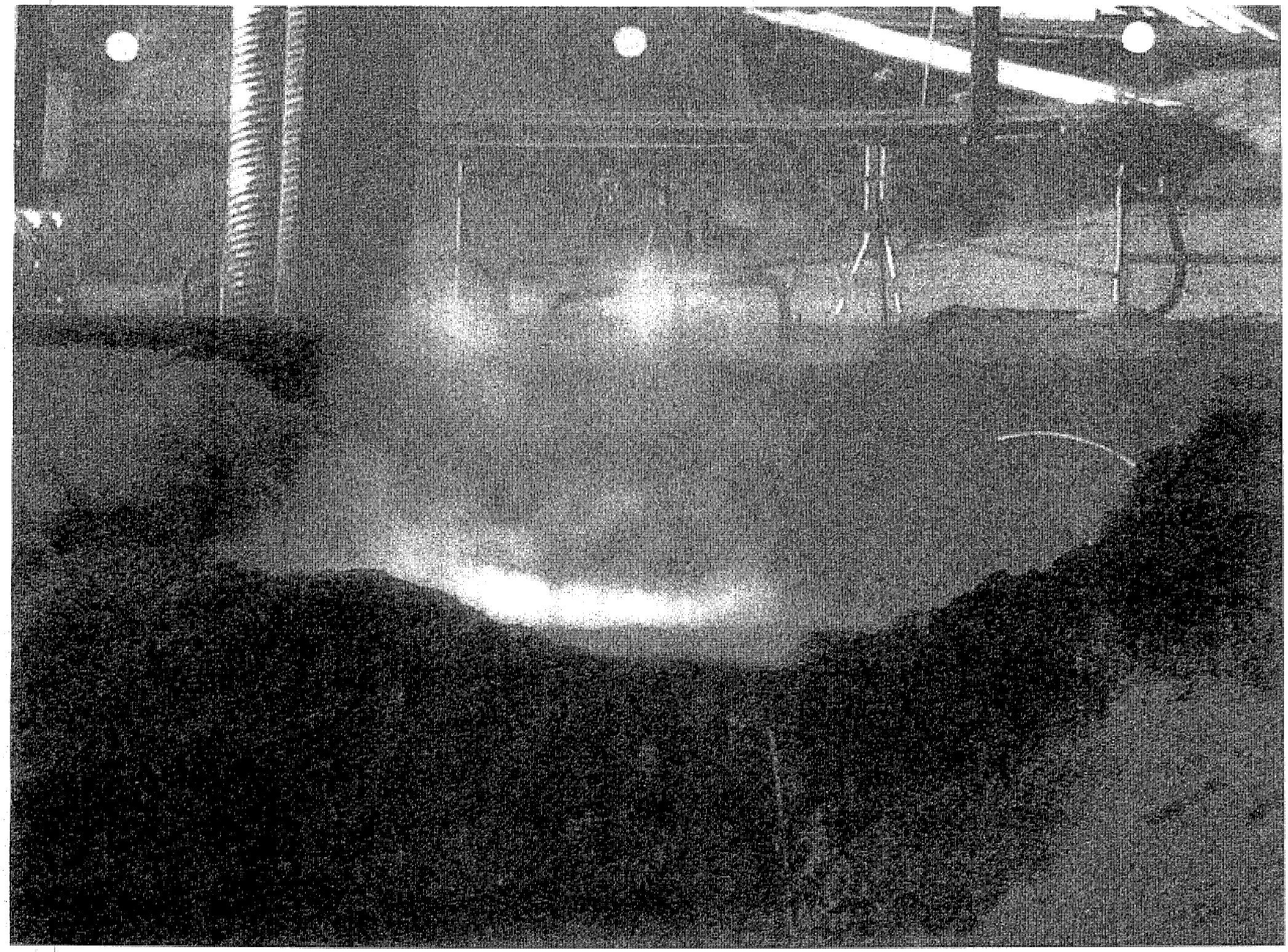
Sincerely,

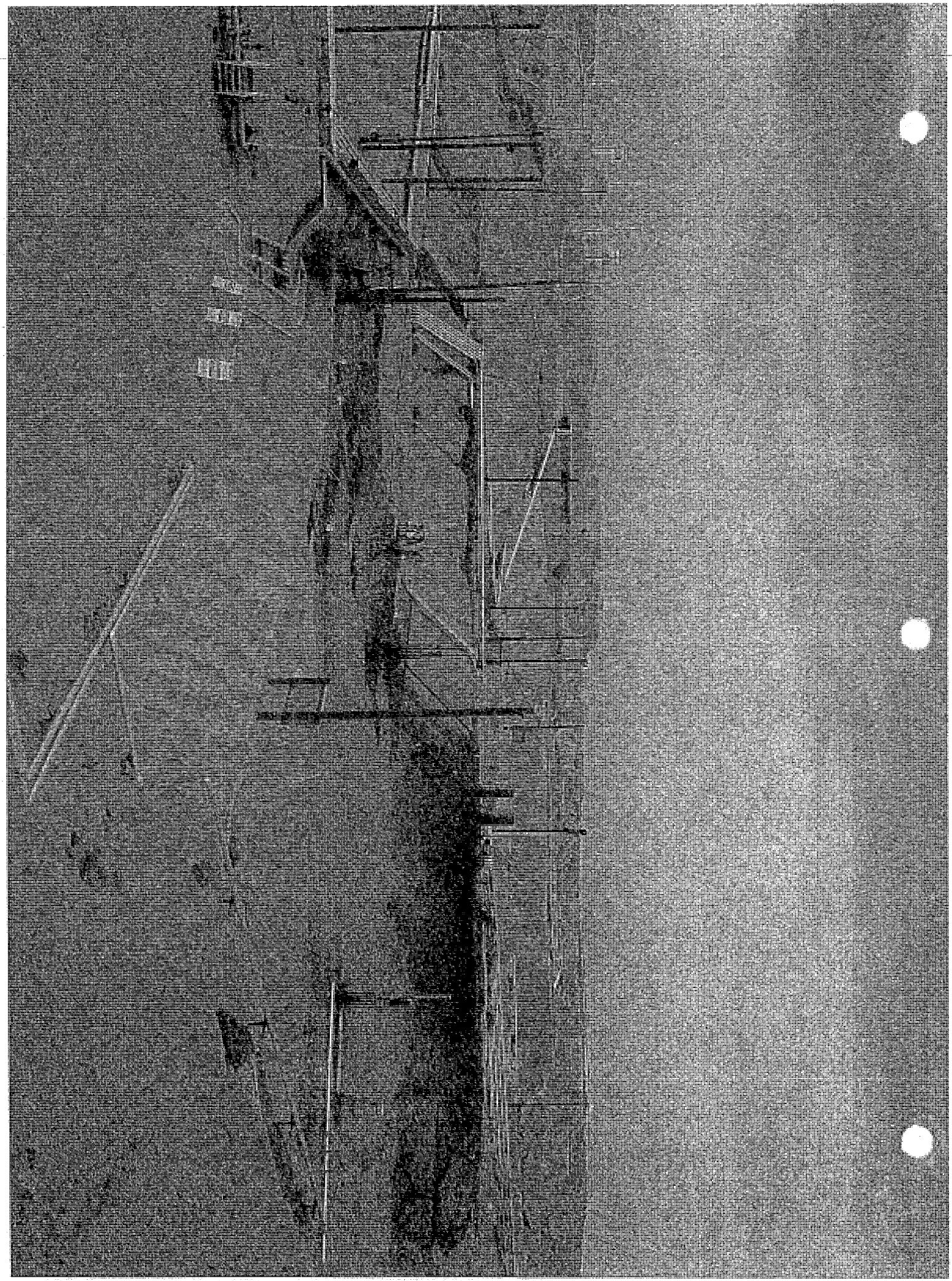
Burton R. Ellison
Senior Oil and Gas Engineer
(661) 334-3674
(661) 861-0279 fax
bellison@consrv.ca.gov

From: Habel, Rob
Sent: Tuesday, July 05, 2011 5:29 PM
To: Ellison, Burt
Cc: Toland, Michael
Subject: Chevron's surface expression near well 20









Chervon
11/8/11

REPORT OF OCCURRENCE

TYPE C Date 11-8-11

LOCATION Midway-Sunset

Operator Chevron Representative Dallas Tubbs Phone 661-762-6427

Occurrence Detected November 8 (month, day), 2011 (year) morning am/pm

Occurrence Ended Ongoing (month, day), _____ (year); _____ am/pm

Field Midway-Sunset Sec., T., R. 21 32S/23E Lease and Well Section 21

Other Location Description Well 20 surface expression crater.

O.E.S. Notified? _____ (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) Dallas Tubbs , Chevron Lead Petroleum Engineer, 661-762-6427

Volume of Spill Undetermined bbls oil; _____ bbls water

Areal Extent 70'X40" & 50'x40'

Property or Waterways Damaged or Threatened N/A

Weather and Sea Conditions (Offshore Spills Only) N/A

Injuries N/A

Source and Cause of Occurrence Collapse of the well 20 surface expression crater due to erosion, allowing fluid from within the crater to flow and spread onto terrace below.

Containment and Cleanup Clean-up not possible due to Cal-OSHA work site restriction for the surrounding area.

Operator Plans to Prevent Reoccurrence At present , unable to control the flow of fluid from the surface expression crater. Remedial work and investigative excavation to begin once Chevron's work site safety plan is approved by Cal-OSHA

Estimate of Property Damage (dollar loss) _____ or Cleanup Cost _____

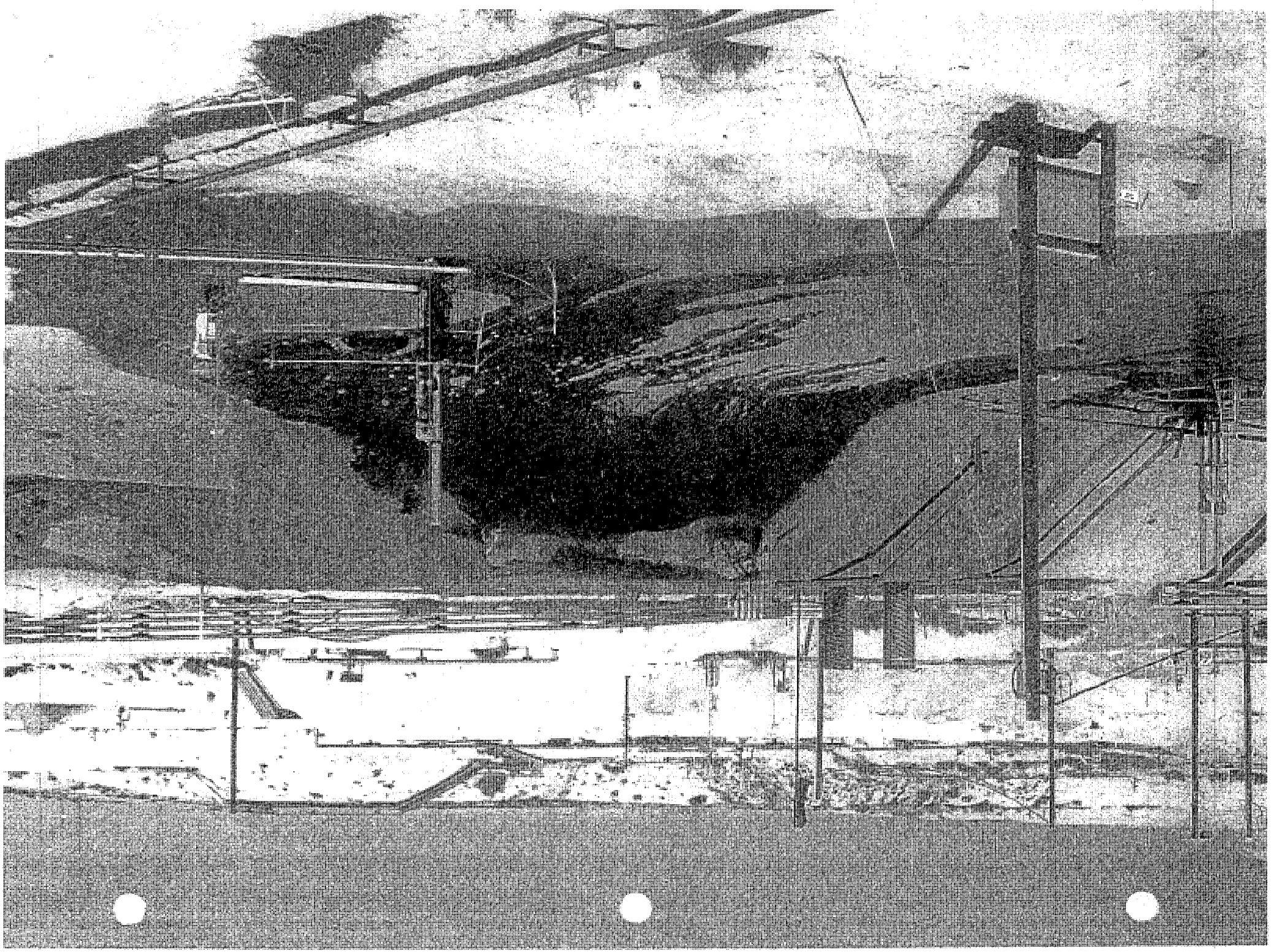
Additional Information At the time of site visit, fluid was steadily streaming down the surface expression crater slope from a reservoir of fluid from within the crater. Continuous and intense bubbling of fluid was observed from within the crater. Additional slope area of the crater is at risk of collapse with the potential release of fluid.

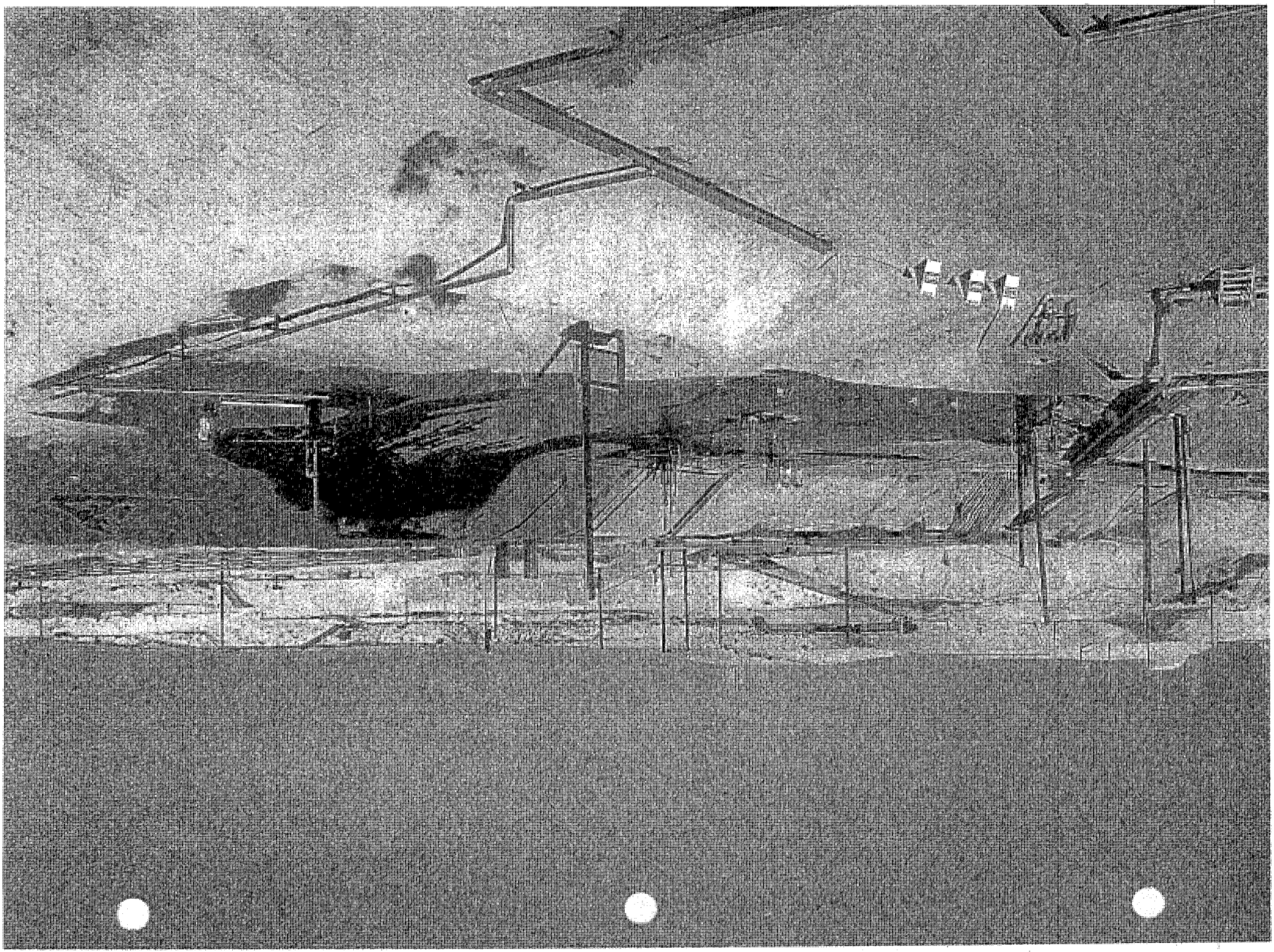
Note: The flow of fluid from the TRC Bull 9 surface expression was observed also to have increased. The Bull 9 surface expression is located approximately 350' northeast of the Chevron Well 20 surface expression.

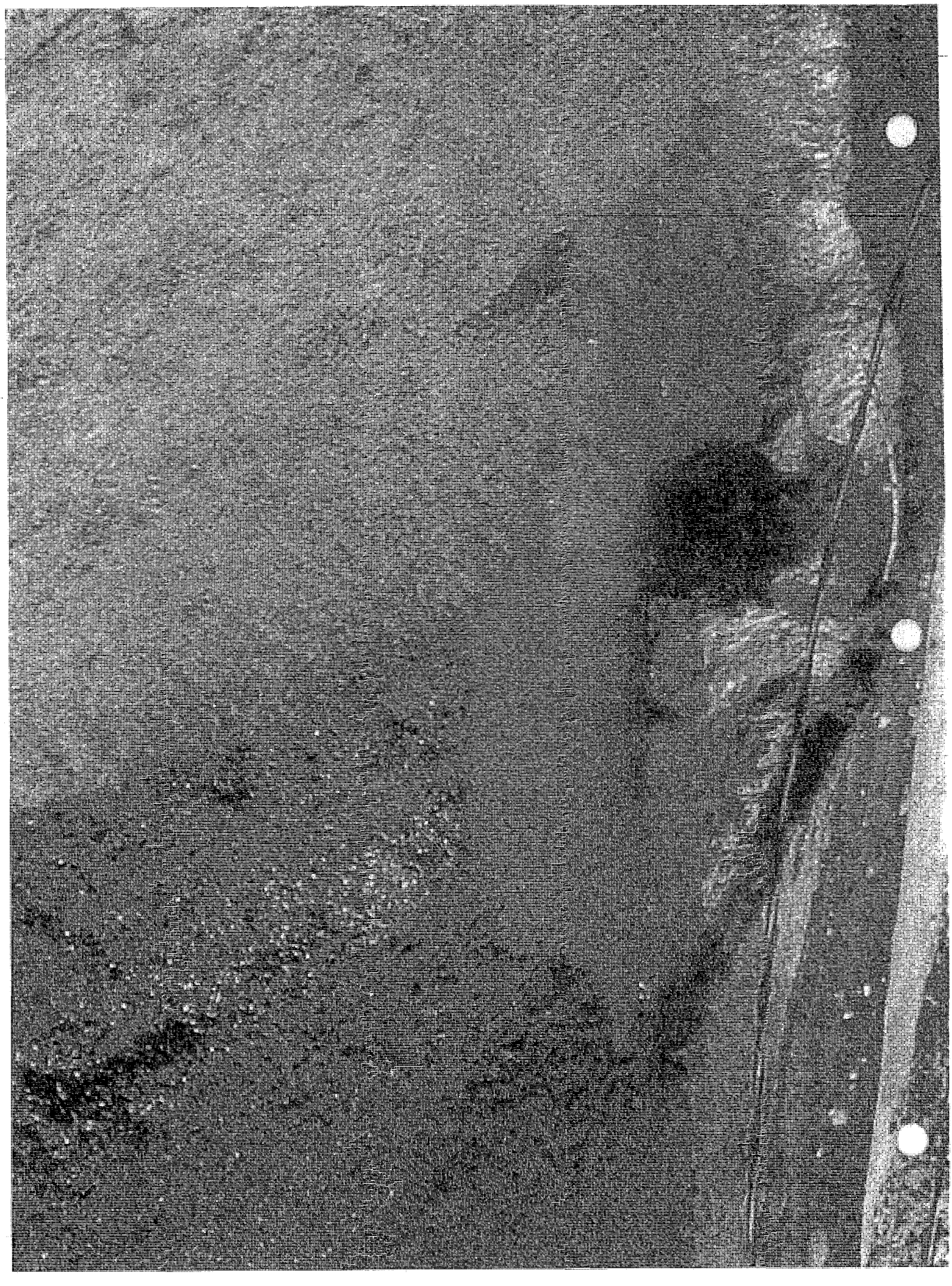
(Use reverse side if additional space is needed.)

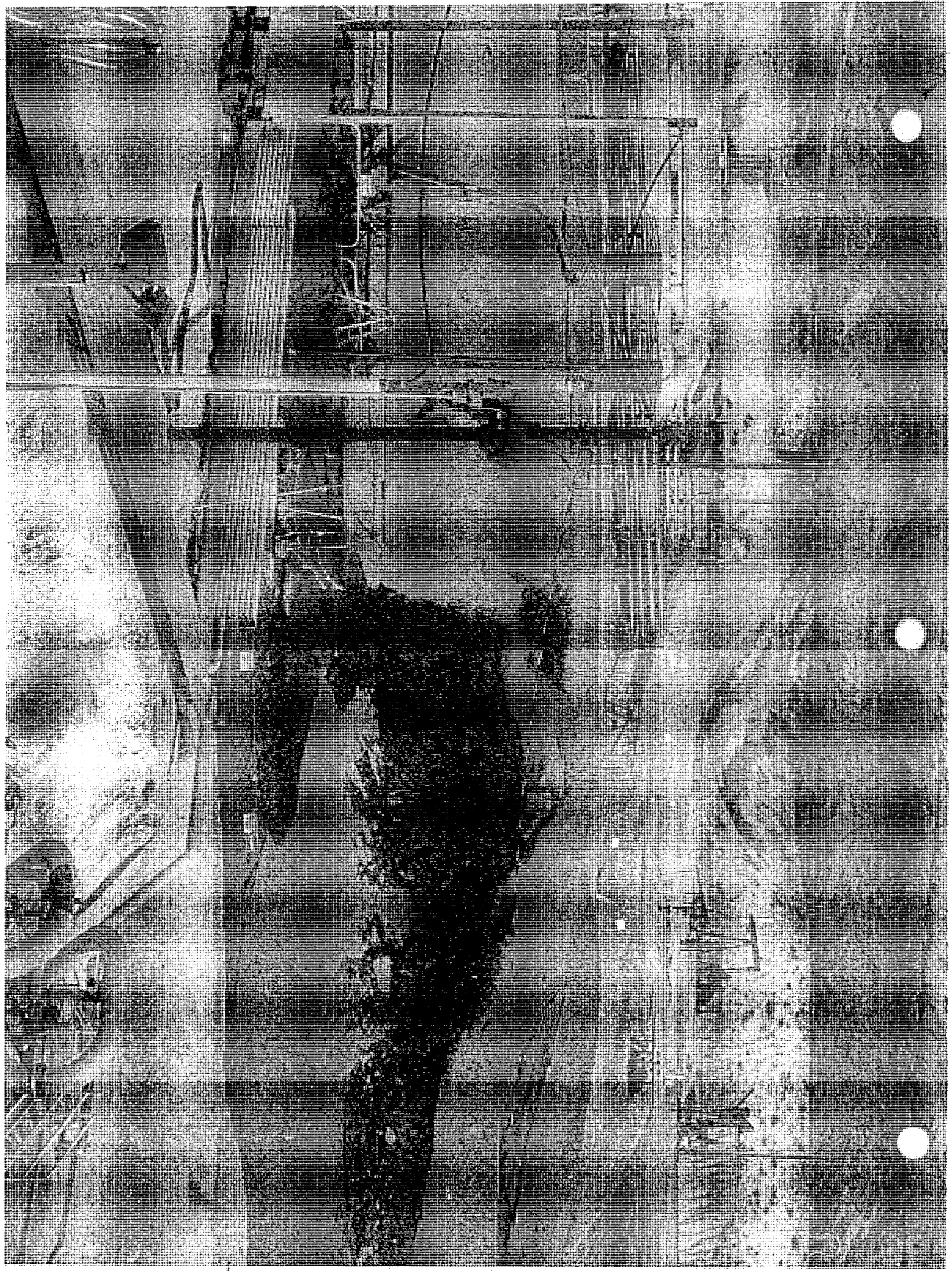
Report Prepared by Michael Toland Date 11-10-11

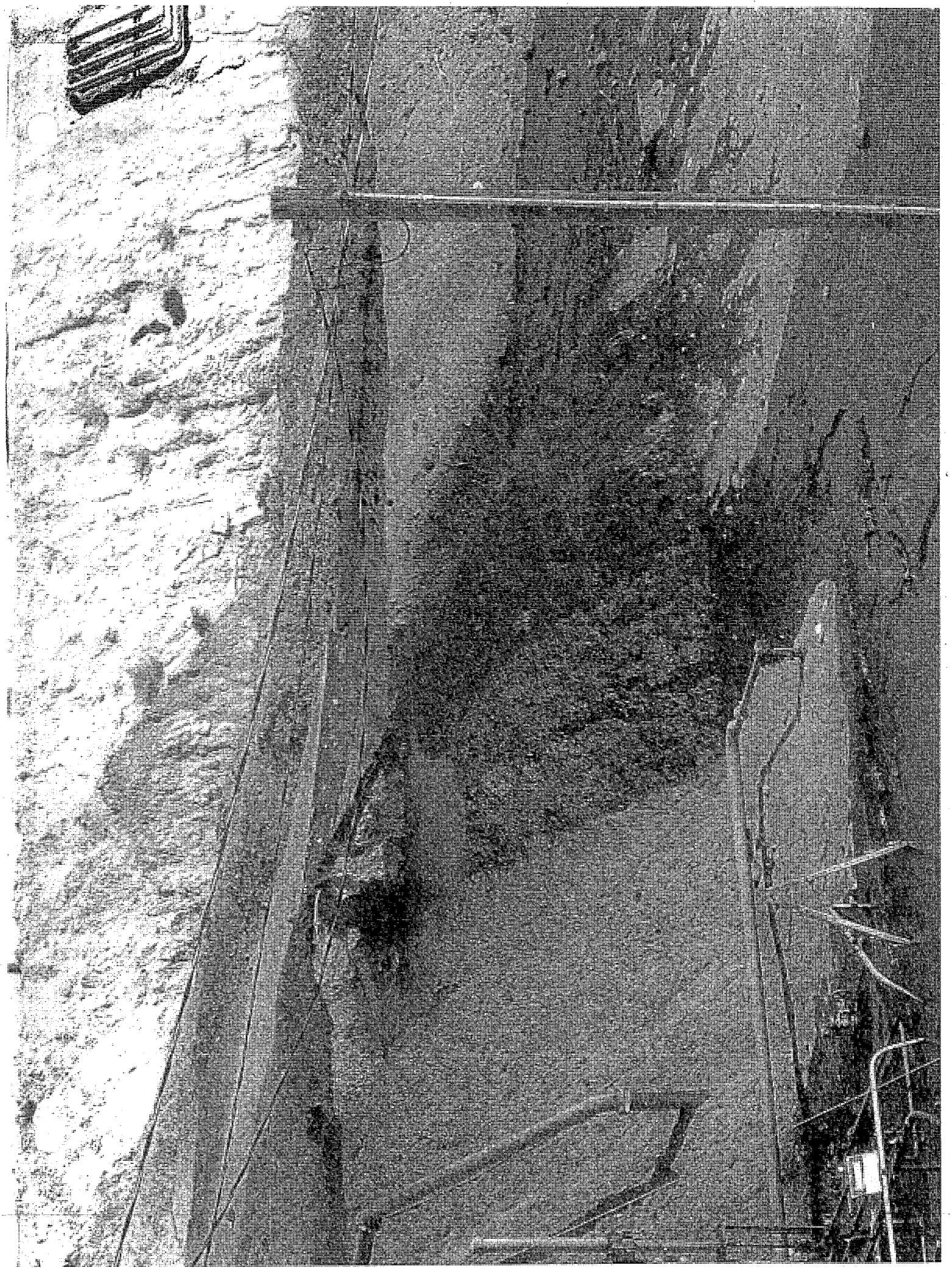
OG184 (3/98)











TRC
6/22/11

REPORT OF OCCURRENCE

TYPE C/D Date 6/22/11

LOCATION Midway-Sunset

Operator TRC Representative Bill Davidson Phone 661-616-8680

Occurrence Detected June 22 (month, day), 2011 (year); 0600 am/pm

Occurrence Ended June 22 (month, day), 2011 (year); _____ am/pm

Field Midway-Sunset Sec., T., R. 22 32S/23E Lease and Well "Bull" 9 & "Birch" 10R

Other Location Description Near the lease boundary with Chevron, approximately 300 yards from Chevron's surface expression at well number 20 on section 21, and the June 21, 2011 fatal accident.

O.E.S. Notified? Yes 11-3797 (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) Bill Davidson, TRC Safety Director, 616-8680, 1025hrs

Volume of Spill 500bbls fluid ,1st 24 hrs bbls oil; 90 to 95% water bbls water

Areal Extent Fluid from surface expression covered two areas. The actual surface expression is near well 'Bull" 9, it covered an area approx. 20'x30'. Fluid flowed to next terrace down and covered an area of approx. 40'x50', near well "Birch" 10R

Property or Waterways Damaged or Threatened N/A

Weather and Sea Conditions (Offshore Spills Only) N/A

Injuries N/A

Source and Cause of Occurrence Steam injection into shallow diatomite reservoir resulting in surface break through of steam, water and oil.

Containment and Cleanup Berms have been placed around both areas. Vacuum trucks are removing fluid as needed. The 1st 24 hours approximately 500 bbls of fluid were removed. The 2nd 24 hours approximately 150 bbls of fluid have been removed. 5 to 10% of the fluid is estimated to be oil.

Operator Plans to Prevent Reoccurrence Under routine cyclic steam schedule, steam injection had been shut-in the day before the expression occurred. Steam injection will not resume until SE fluid ceases. Steam inj. will be brought back slowly and monitored

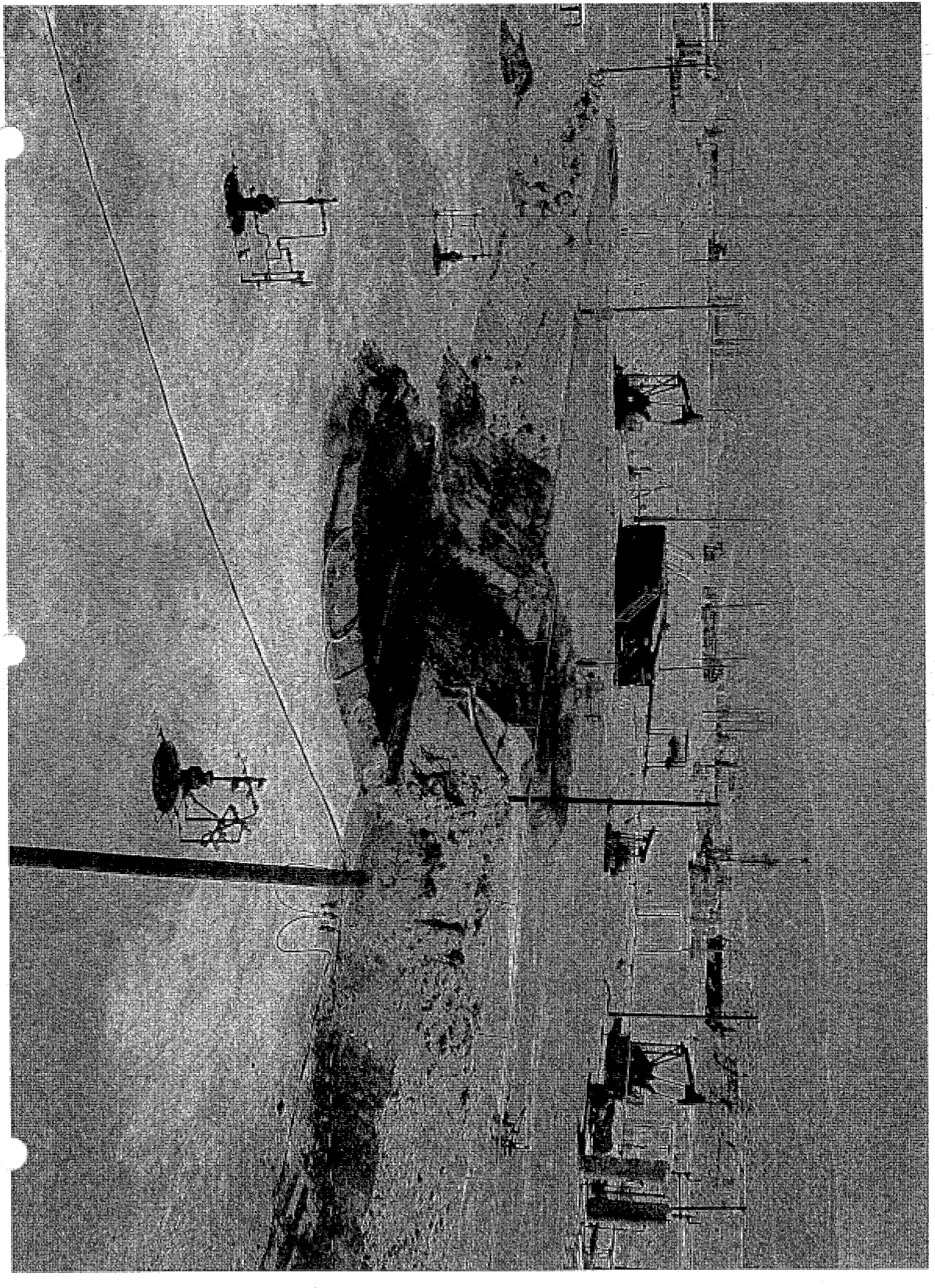
Estimate of Property Damage (dollar loss) _____ or Cleanup Cost _____

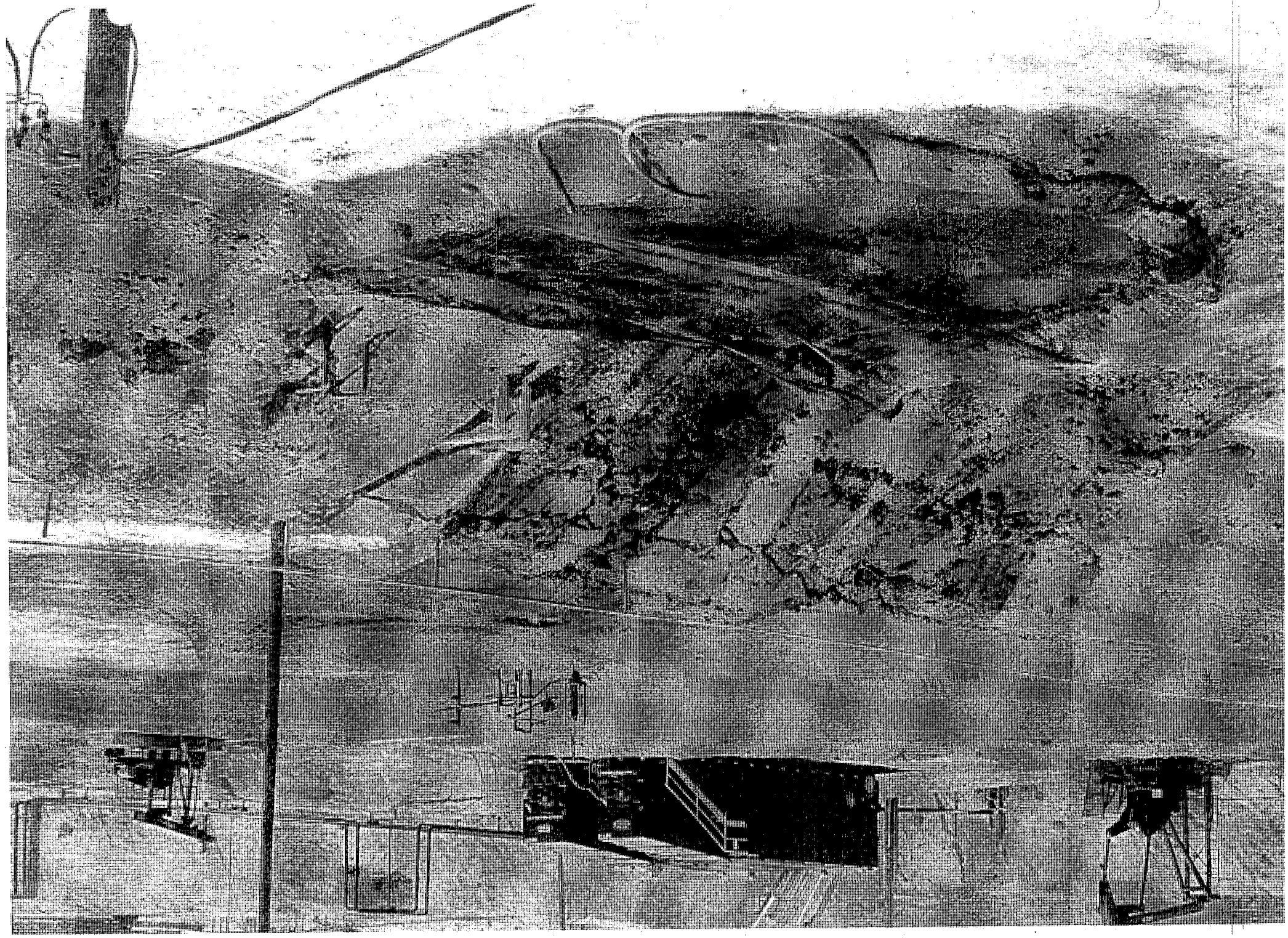
Additional Information This surface expression is located in the middle of14 cyclic steam injection wells. The wells are currently on flow back under scheduled maintenance. It was reported that the surface expression surfaced and spread within a few minutes.

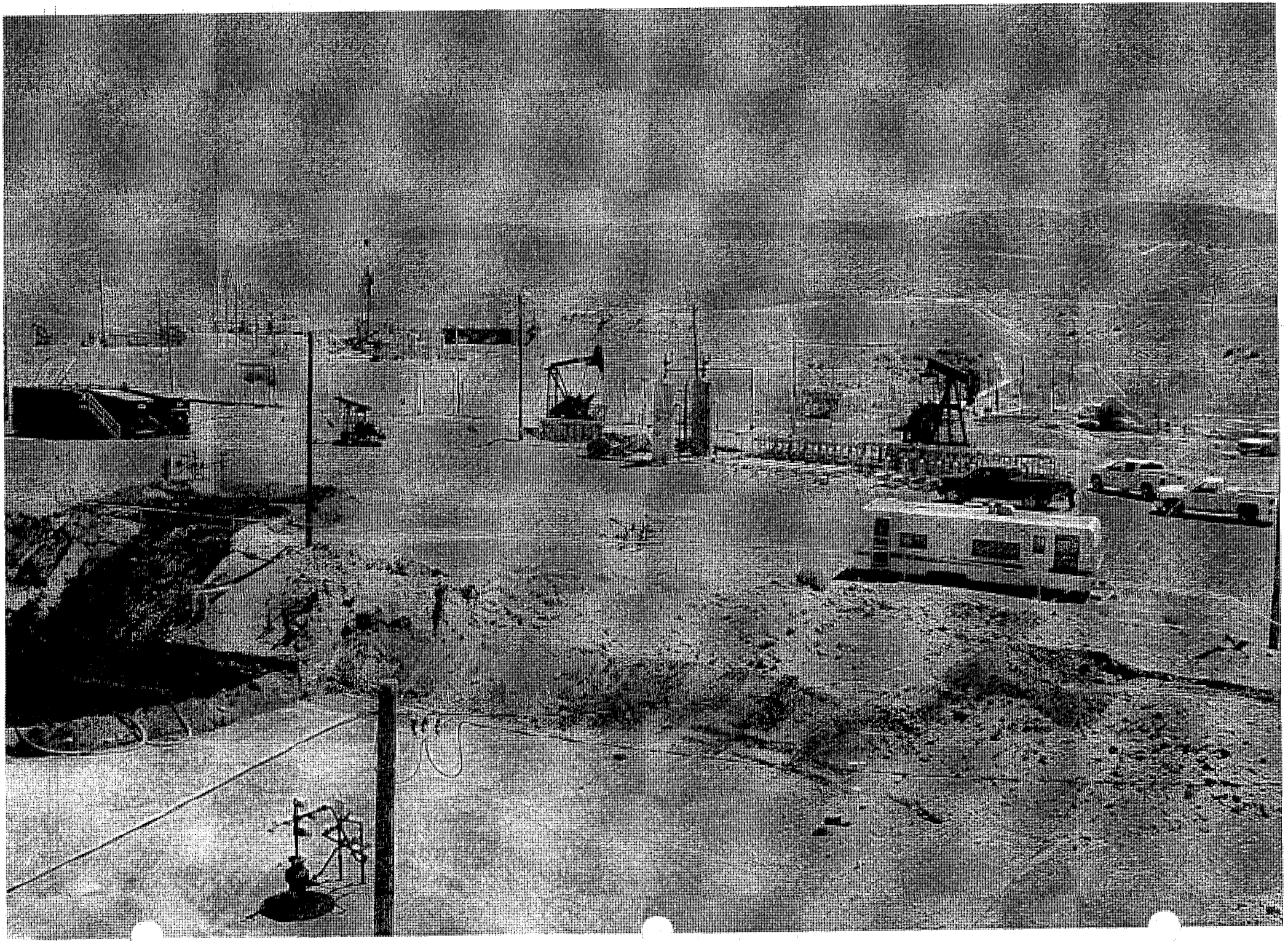
(Use reverse side if additional space is needed.)

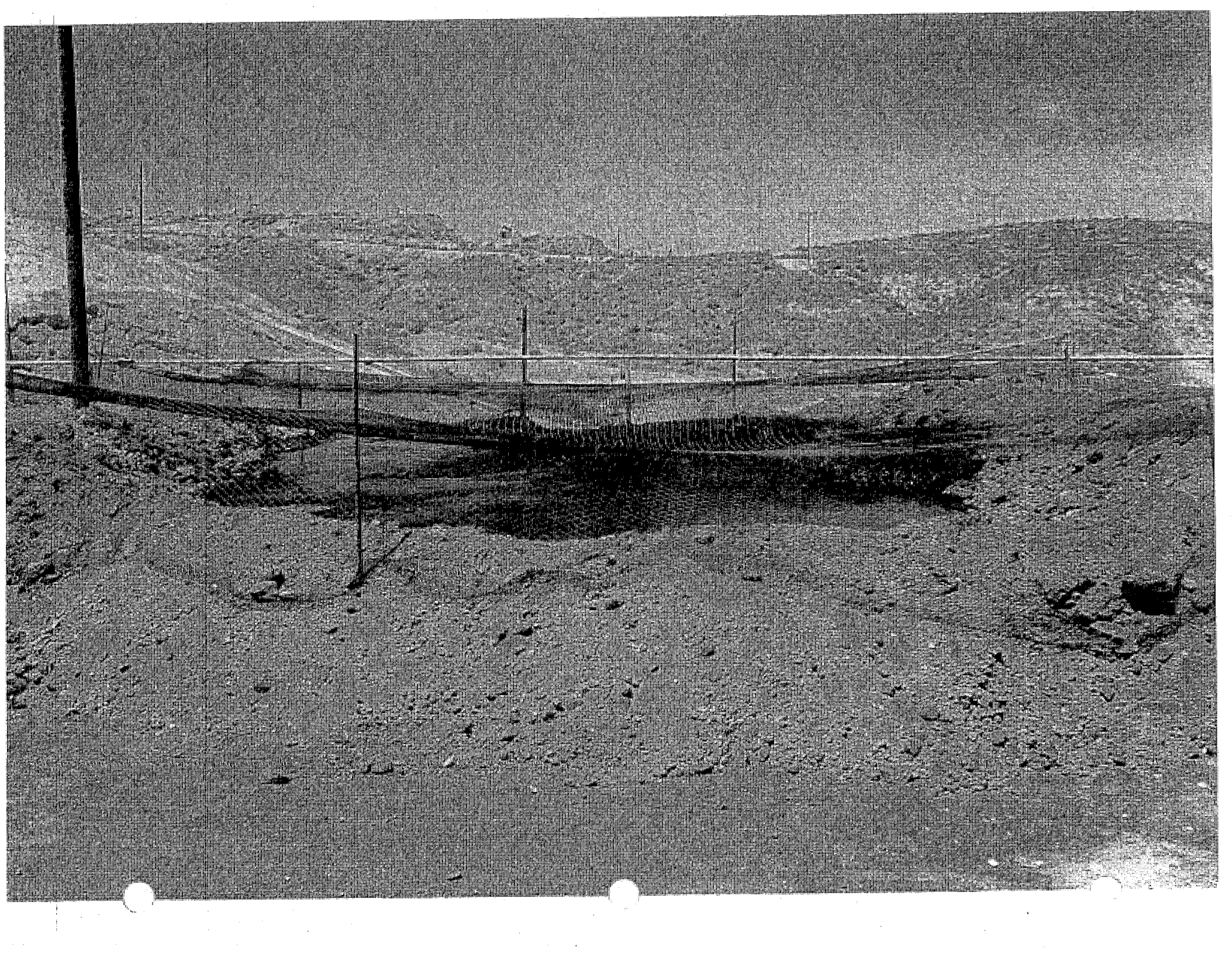
Report Prepared by Michael Toland Date 6/24/11

OG184 (3/98)









TRC
10/11/11

REPORT OF OCCURRENCE

TYPE C Date 10-11-11

LOCATION Midway-Sunset

Operator TRC Representative Todd Rogers Phone 661-763-5028

Occurrence Detected October 11 (month, day), 2011 (year) ; 0315 am/pm

Occurrence Ended Ongoing as of 10-12 (month, day), 2011 (year) ; _____ am/pm

Field Midway-Sunset Sec., T., R. 22 T32S/R23E Lease and Well Birch and Bull leases

Other Location Description Area along lease boundary between TRC and Chevron, east of Chevron's well 20 surface expression.

O.E.S. Notified? 11-6065 (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) Occurrence noticed during regular inspection of area surface expressions. Incident was not reported to Cal EMA by TRC until after DOGGR made contact with TRC supervisor.

Volume of Spill Approximately 5 bbls bbls oil; Approximately 50 bbls bbls water

Areal Extent Approximately 200' x 40'

Property or Waterways Damaged or Threatened

Weather and Sea Conditions (Offshore Spills Only) N/A

Injuries N/A

Source and Cause of Occurrence Excavation of trench by TRC to connect two TRC surface expression sites, combined with coincidental increase in activity at Chevron's well 20 surface expression , as evident by a tilt meter event on October 10 located at Chevron's well 20 surface expression and the increase in steam emitting from the surface expression crater.

Containment and Cleanup Backhoe and vacuum truck.

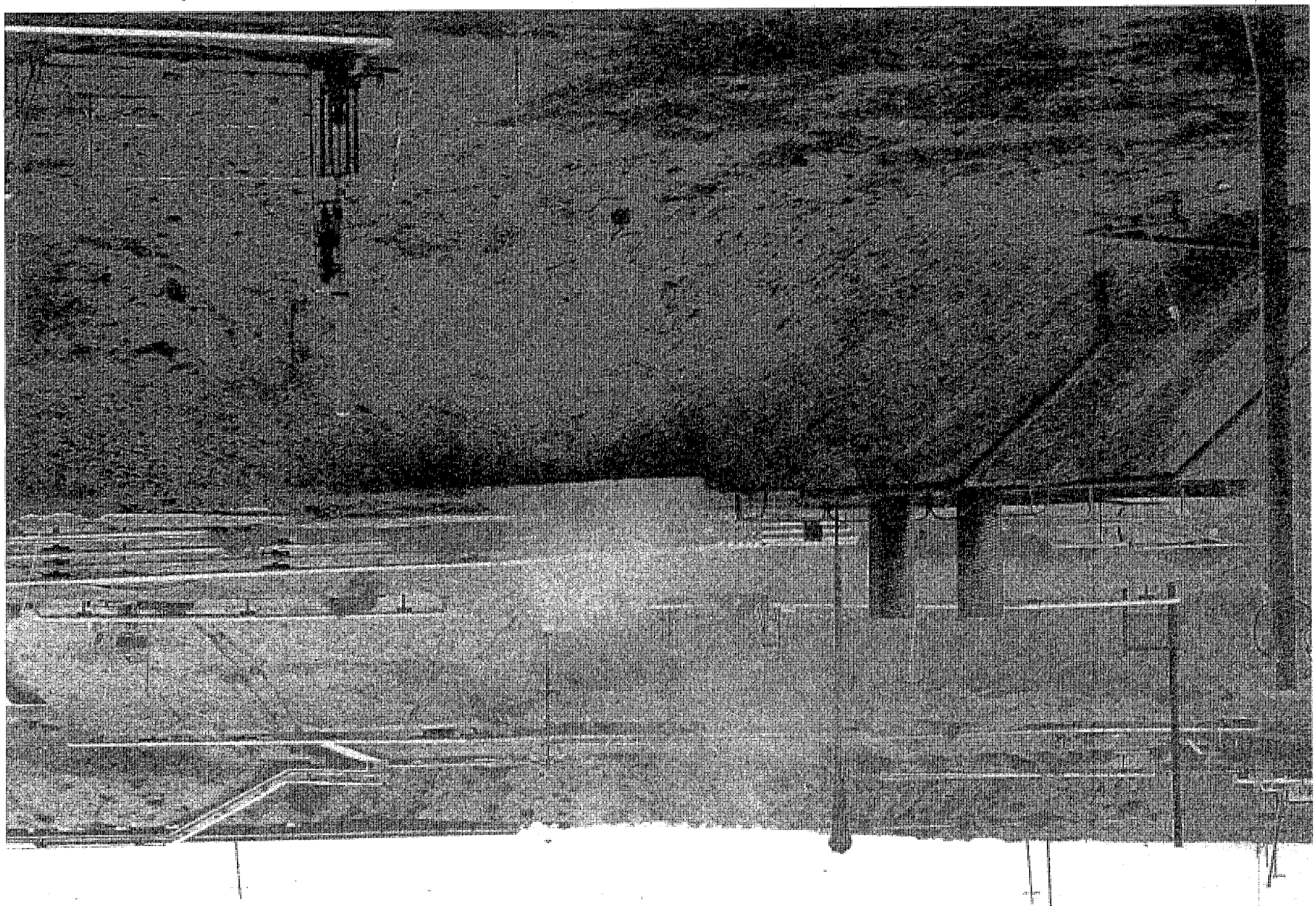
Operator Plans to Prevent Reoccurrence Area to be bermed and fluid to be siphoned off for processing.

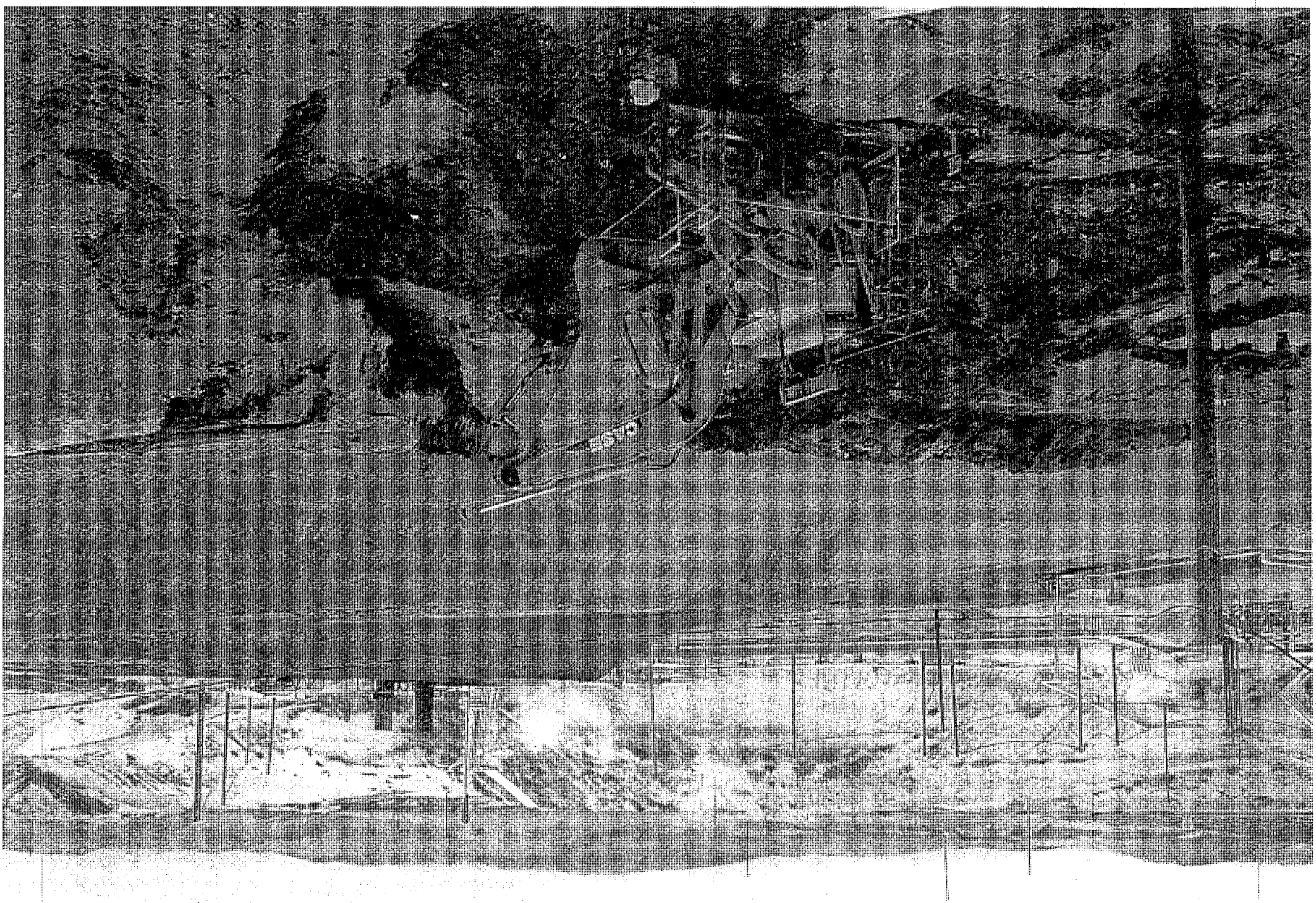
Estimate of Property Damage (dollar loss) _____ or Cleanup Cost _____

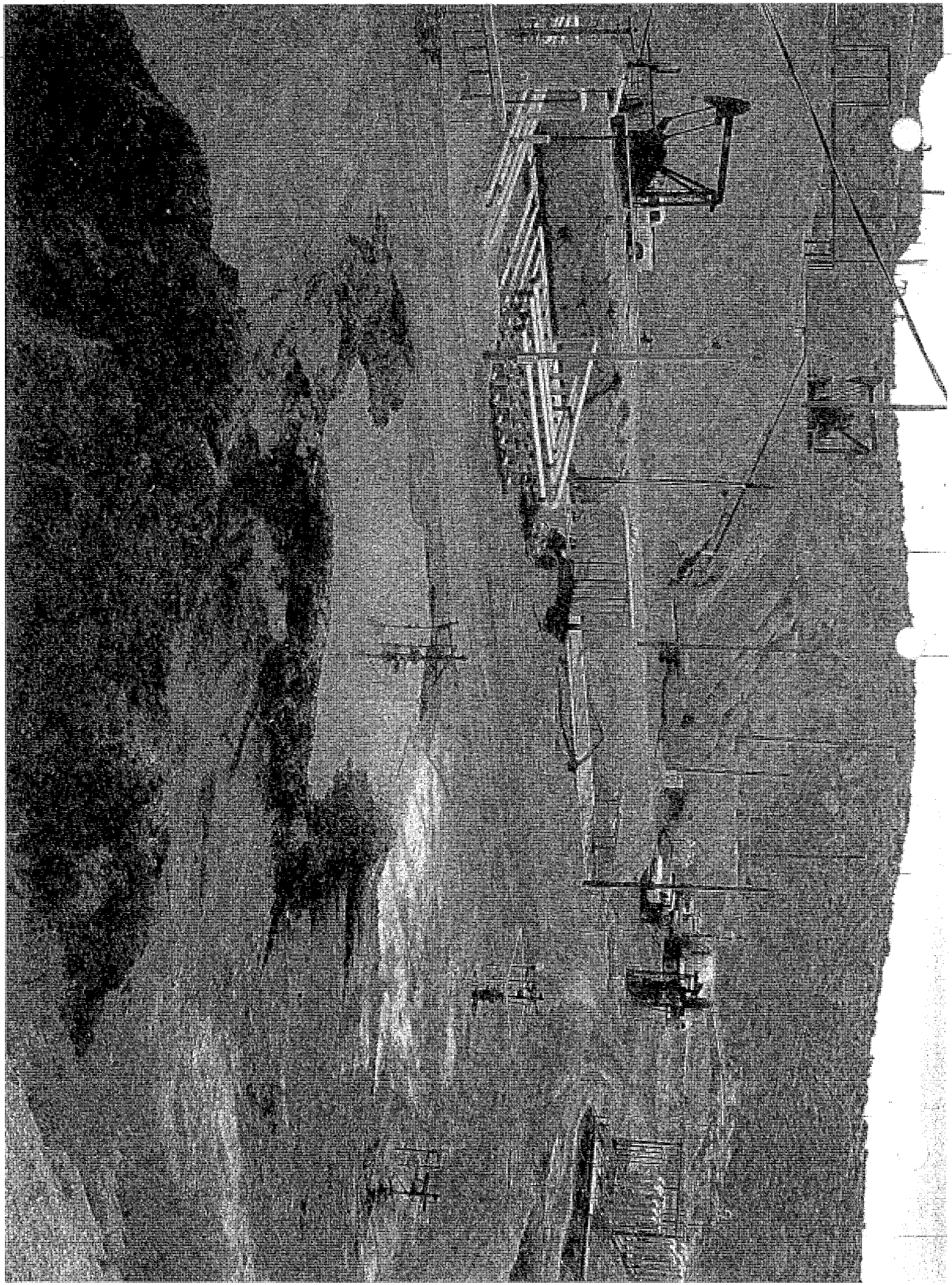
Additional Information Between 10pm and 10am on October 9th and 10th, Chevron well 20 surface expression experienced a tilt meter event with a increased amount of steam rising from the surface expression crater. On October 10, TRC began excavation to connect two surface expressions on their side of the lease line. The older of these two these two surface expressions is being drained by gravity into poly line to a processing tank. Connection to the 2nd newer surface expression would allow it also to be drained by gravity instead of pooling at the base of a slope and being subject to washout by rainwater. During the night after the day of excavation by TRC, and most likely due to the coincidental increase in activity at the well 20 surface expression and surrounding area, the excavated trench overflowed with fluid that effected the surrounding location. Of significance is tilt information received from Chevron showing a PXP area just outside of the 800' steam injection restriction radius that experienced a high level of uplift between October 6 -10. This could possibly be evidence of injected steam outside of the 800' restrictive radius having an effect on the Chevron well 20 surface expression and surrounding area.

(Use reverse side if additional space is needed.)

Report Prepared by Michael Toland Date 10-12-11



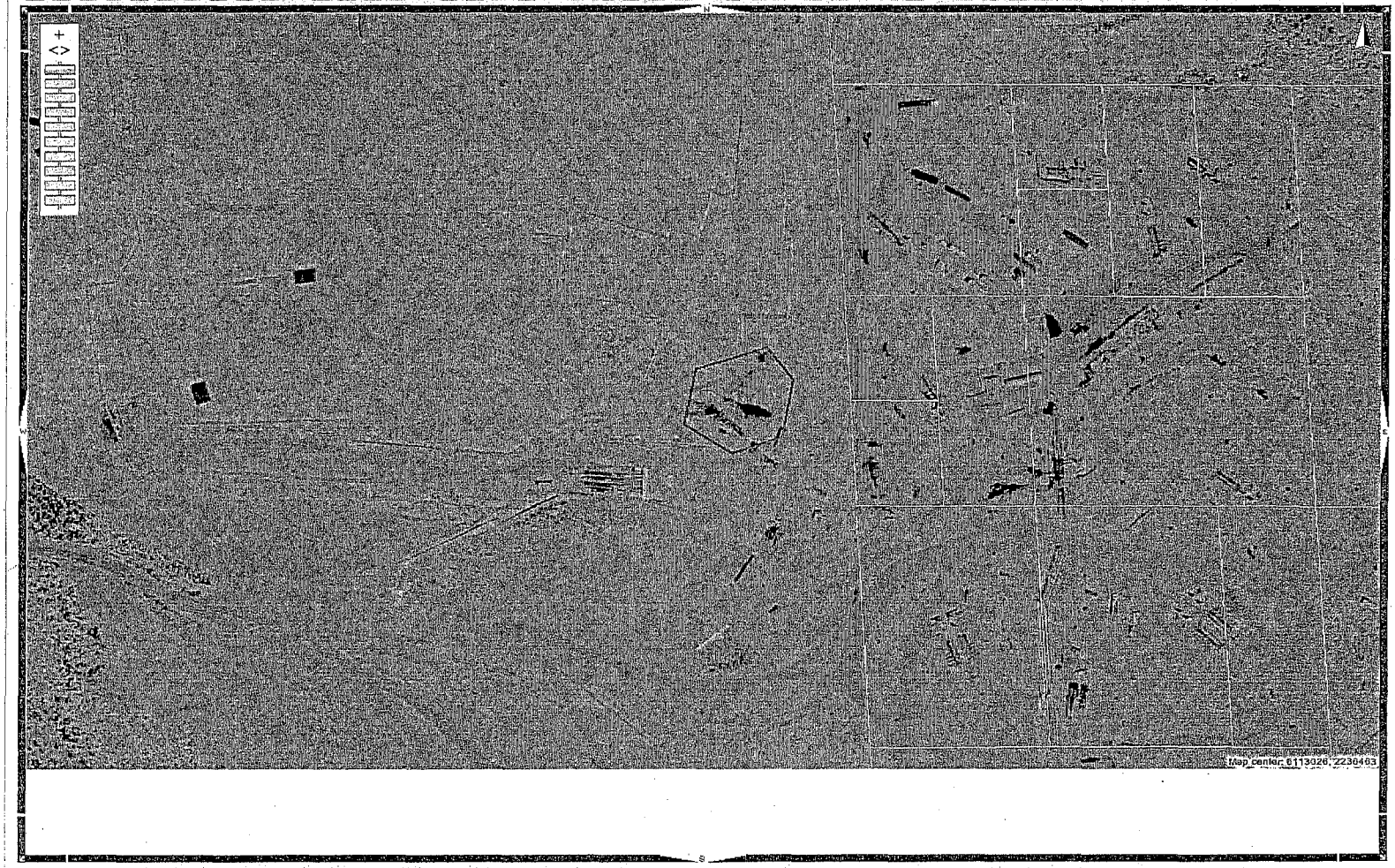




Berry Petroleum
6/21/11

Kern County
Online Mapping System

About | Layers | Legend | Key Map | Bookmarks | Locate | Print PDF | Help | Exit



Measure Tool

This tool allows you to draw a polygon on top of the map. The tool also reports the positions of the points of the polygon, the distance between each point, as well as the total area and perimiter of the polygon.

Point 1:	119° 30' 0.5" W 35° 7' 43.6" N
Point 2:	119° 30' 1.8" W 35° 7' 43.2" N
Distance from Previous:	32.8 m
Point 3:	119° 30' 2.0" W 35° 7' 42.4" N
Distance from Previous:	26.0 m
Point 4:	119° 30' 1.1" W 35° 7' 42.0" N
Distance from Previous:	25.0 m
Point 5:	119° 30' 0.2" W 35° 7' 42.2" N
Distance from Previous:	23.3 m
Point 6:	119° 30' 0.1" W 35° 7' 43.1" N
Distance from Previous:	26.8 m
Distance to End:	18.5 m
Total Perimiter:	152.4 m
Total Area:	1,651.7 sq. m

Draw Polygon | Clear Points

Scale: 1: 1,250 go Map Tool: Polygon Markup Active Layer: * NO ACTIVE LAYER *

powered by Geocortex

Chevron
8/5/11

Jorgenson, Heidi

From: Habel, Rob
Sent: Monday, August 29, 2011 11:59 AM
To: Jorgenson, Heidi
Subject: FW:
Attachments: Chevron Sec 21 Well 20 SE 8-5-11 014.jpg; Chevron Sec 21 Well 20 SE 8-5-11 007.jpg; Chevron Sec 21 Well 20 SE 8-5-11 003.jpg; Chevron Sec 21 Well 20 SE 8-5-11 011.jpg; Chevron Sec 21 Well 20 SE 8-5-11 008.jpg; Chevron Sec 21 Well 20 SE 8-5-11 010.jpg

Heidi:

This is one of those pieces of data for the assignment.

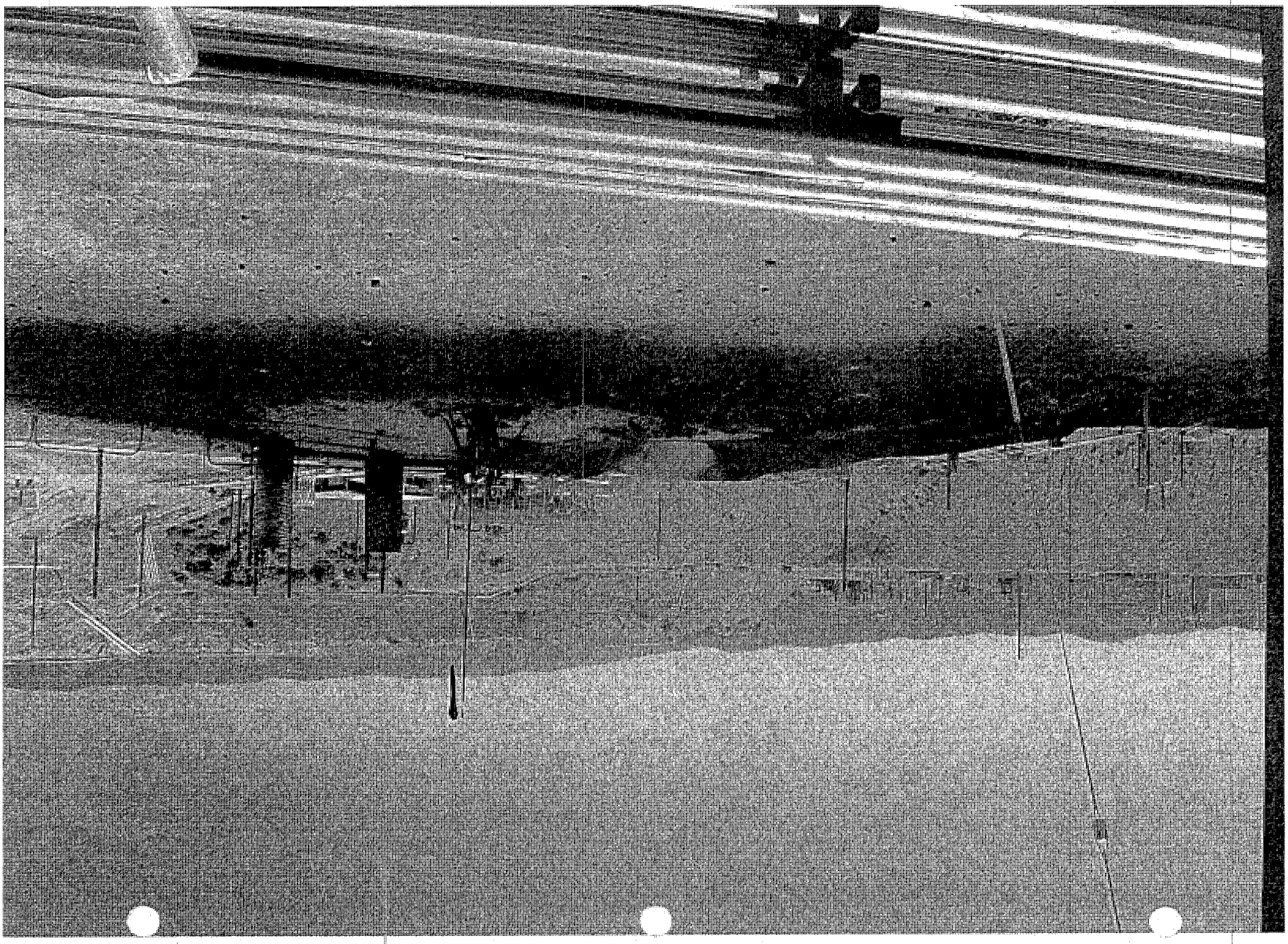
Rob

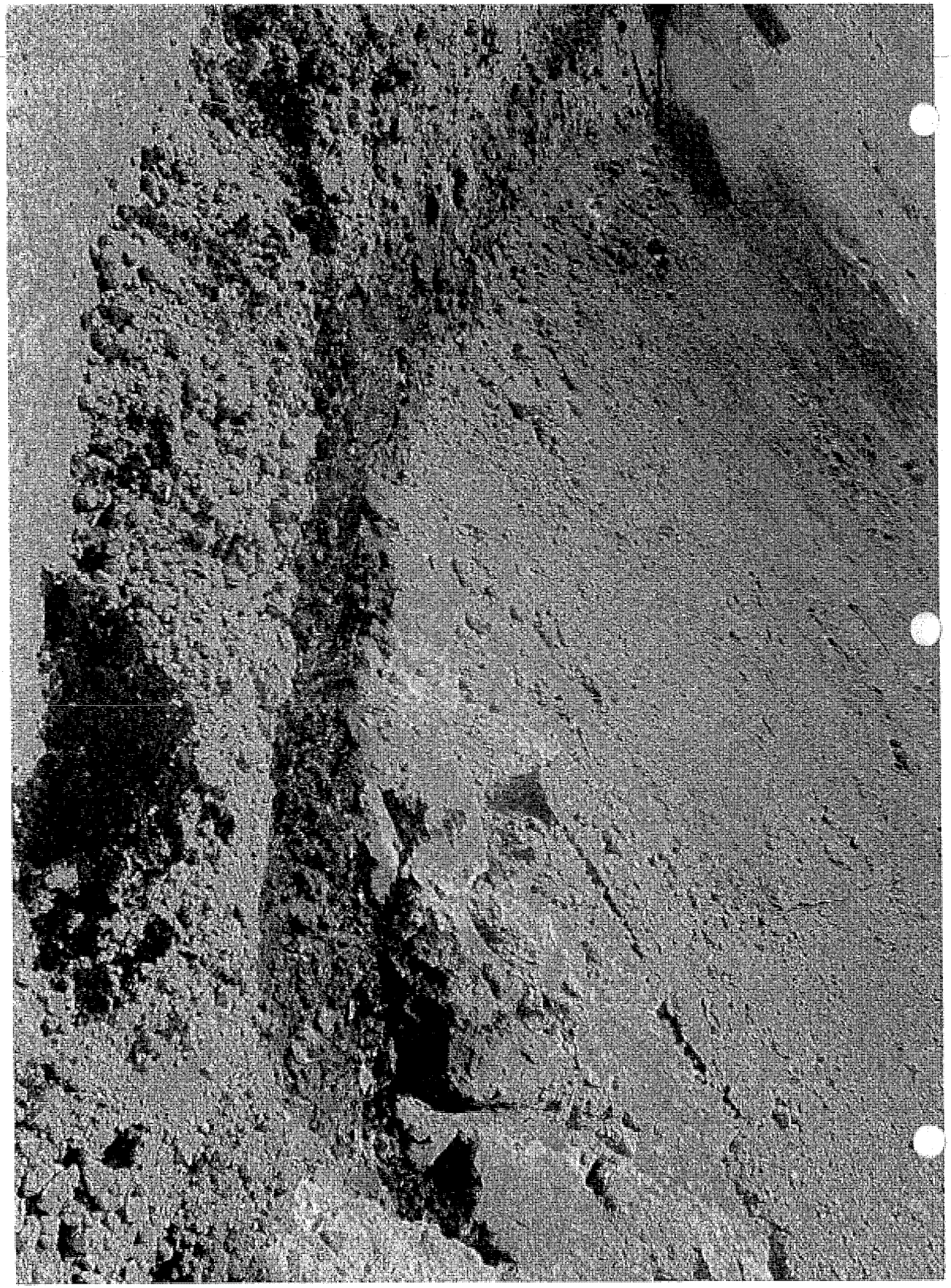
From: Toland, Michael
Sent: Friday, August 05, 2011 3:30 PM
To: Miller, Elena; Habel, Rob
Cc: Jaszarowski, Joyce; Kustic, Tim; Ellison, Burt; Wermiel, Dan
Subject:

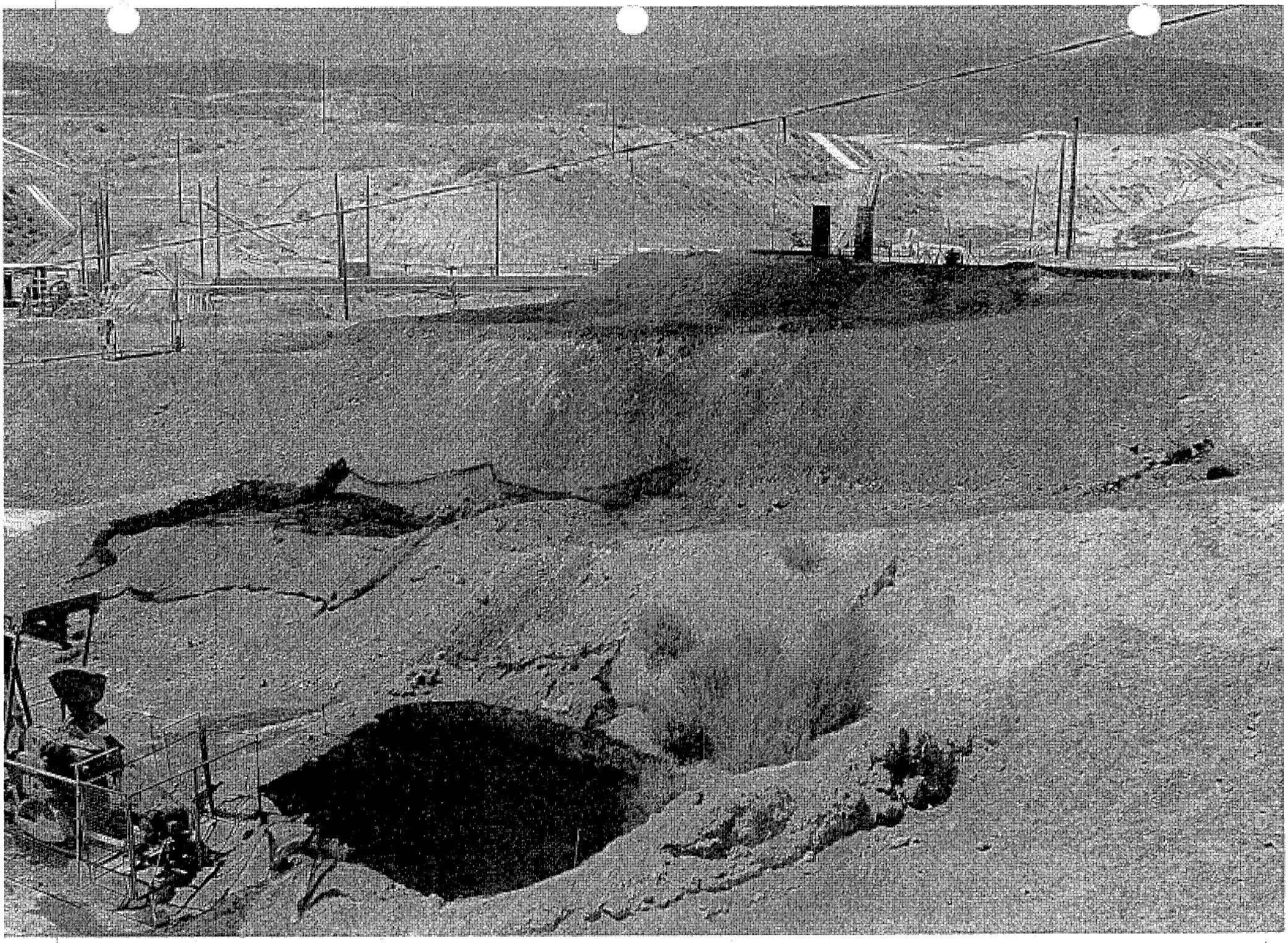
Elena,

Attached are photographs of the effects of the "eruption" that occurred in the during the night of August 5 at the Chevron well 20 surface expression site. The expelled material is from the crater that formed after the June 21 accident. A report will follow, but a few facts are:
A 5' radius surface expression 40' northeast was reported on August 3.
Tilt meter events in the area were recently recorded.
Chevron reportedly has had a 900' radius restriction around the sight.
TRC wells have reportedly been on steam injection recently near the location.
Spray and rocks up to 6" in diameter were expelled from the crater as far as approximately 50 yards away.
Chevron attorney Christy Marquez called this afternoon requesting an immediate restriction on steam injection for TRC wells near the crater location.
The current 150' radius restriction on TRC wells would not include some wells near the crater location.
TRC has not reported this week any surface expression activity on their property, which has been considerable.

Michael Toland
Facilities Program Engineer
Department of Conservation
Division of Oil, Gas and Geothermal Resources
District 4
661-334-3662







Chevron
8/17/11

Jorgenson, Heidi

From: Habel, Rob
Sent: Monday, August 29, 2011 12:11 PM
To: Jorgenson, Heidi
Subject: FW: Eruptive Activity at Chevron's Well 20 Surface Expression Site- 8/17/11

Heidi:

This is one of those pieces of data for the assignment.

Rob

From: Toland, Michael
Sent: Wednesday, August 17, 2011 1:06 PM
To: Habel, Rob; Kustic, Tim
Cc: Ellison, Burt; Jaszarowski, Joyce; Glinzak, Mike; Wermiel, Dan
Subject: Eruptive Activity at Chevron's Well 20 Surface Expression Site- 8/17/11

Chevron Operations Supervisor Bob Allen reported that at 1010 hrs this morning another eruption occurred at the well 20 surface expression/fatality accident site crater. This eruption was described as significantly larger than the one that occurred on August 5 and sent fluid approximately 100' high, with steam vapor even higher. The radius of fluid spray is possibly up to 70 to 80 yards distant from the crater.

Both TRC and Chevron have had wells on steam injection. The TRC well is 640' away and was taken off injection when the eruption occurred, but according to Mr. Allen may be put back on injection. The two Chevron wells are 766' and 988' away from the eruption site. The well at 766' was shut in at 930 hrs this morning on a normal cycle schedule. The well at 988' is still on injection. Chevron has the area restricted.

An item of interest, we recently learned, is a Chevron directional well that has its surface location south of the well 20 surface expression site, but runs north along the Chevron/TRC lease line to near the well 20 site. Although its purpose is to act as a French drain for steam and fluid, it is possible that it also could act a conduit for steam and fluid to the well 20 site from both Chevron and TRC steam injection wells.

Due to this recent volatile activity at the well 20 site, District 4 is recommending 1000' radius steam injection restriction around this location in the form of an emergency formal order to both Chevron and TRC. We are available to supply any technical information to support an order.

Michael Toland
Facilities Program Engineer
Department of Conservation
Division of Oil, Gas and Geothermal Resources
District 4
661-334-3662

REPORT OF OCCURRENCE

TYPE C Date 8-17-11

LOCATION Sec 21 T32S/23E

Operator Chevron Representative Bob Allen Phone 768-3636

Occurrence Detected August 17 (month, day), 2011 (year); 1010hr am/pm

Occurrence Ended See Comments (month, day), _____ (year); _____ am/pm

Field Midway-Sunset Sec., T., R. 21 T32S/R23E Lease and Well

Other Location Description A large crater that formed after the June 21, 2011 fatality accident near the well 20 surface expression. Crater is approximately 30' to 40' south of well K210.

O.E.S. Notified? (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) Bob Allen, Chevron Operations Supervisor, 768-3636, 1130 hrs

Volume of Spill 20-25 bbls fluid bbls oil; bbls water

Areal Extent 200' x 120' from expelled and flowing fluid, Fluid expelled approx. 100' vertically, steam vapor plume to possibly 200'or higher.

Property or Waterways Damaged or Threatened N/A

Weather and Sea Conditions (Offshore Spills Only) N/A

Injuries N/A

Source and Cause of Occurrence Injection of steam above formation fracture gradient into shallow diatomite reservoir. Subsurface pressure builds from injected steam and pressurized formation fluid. Fracture pathways form to allow the release of steam, oil and water to the surface.

Containment and Cleanup To be determined after safety and stability of area is confirmed.

Operator Plans to Prevent Reoccurrence Restriction of steam operations within a radius of the surface expression site.

Estimate of Property Damage (dollar loss) or Cleanup Cost

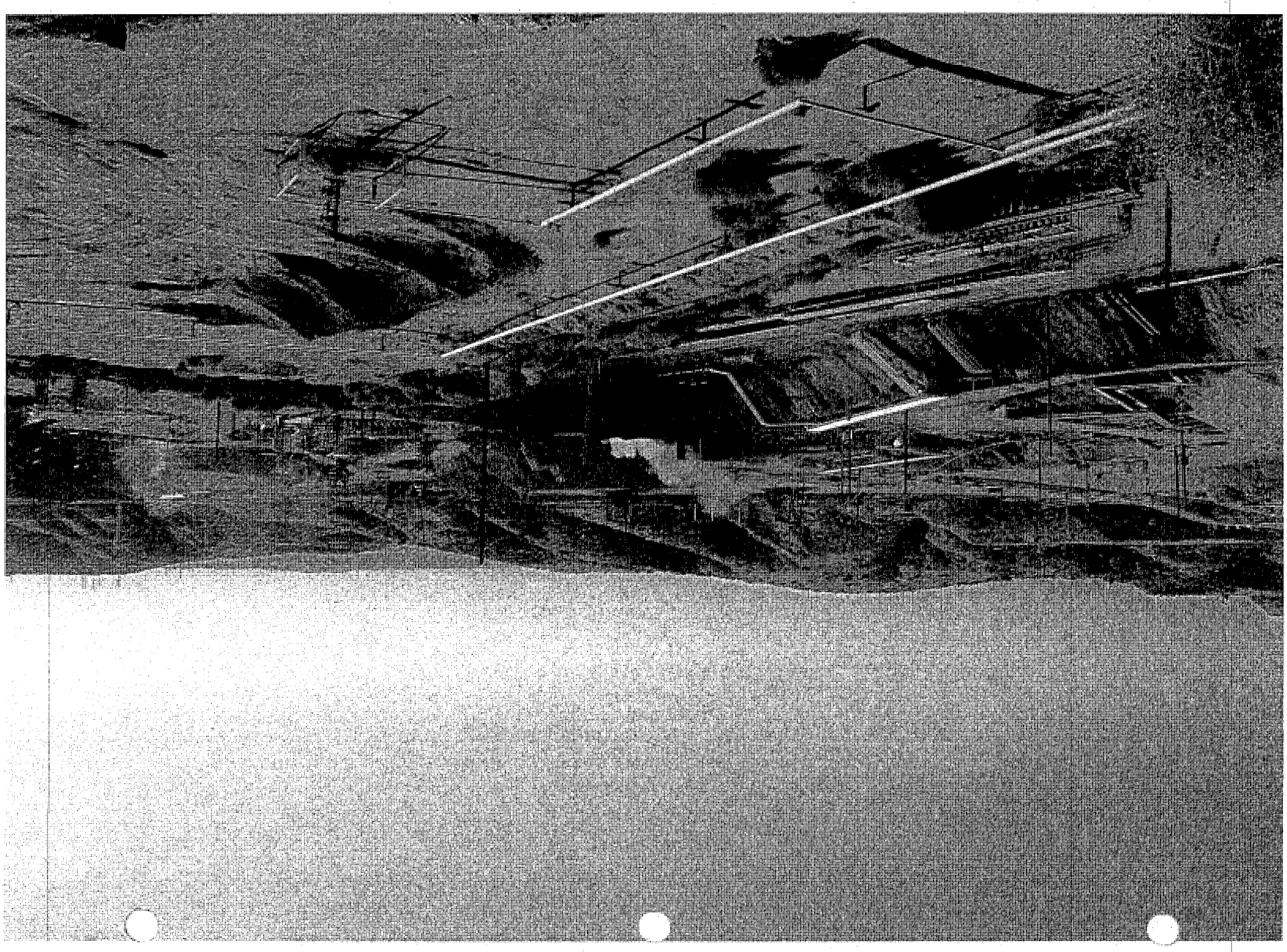
Additional Information

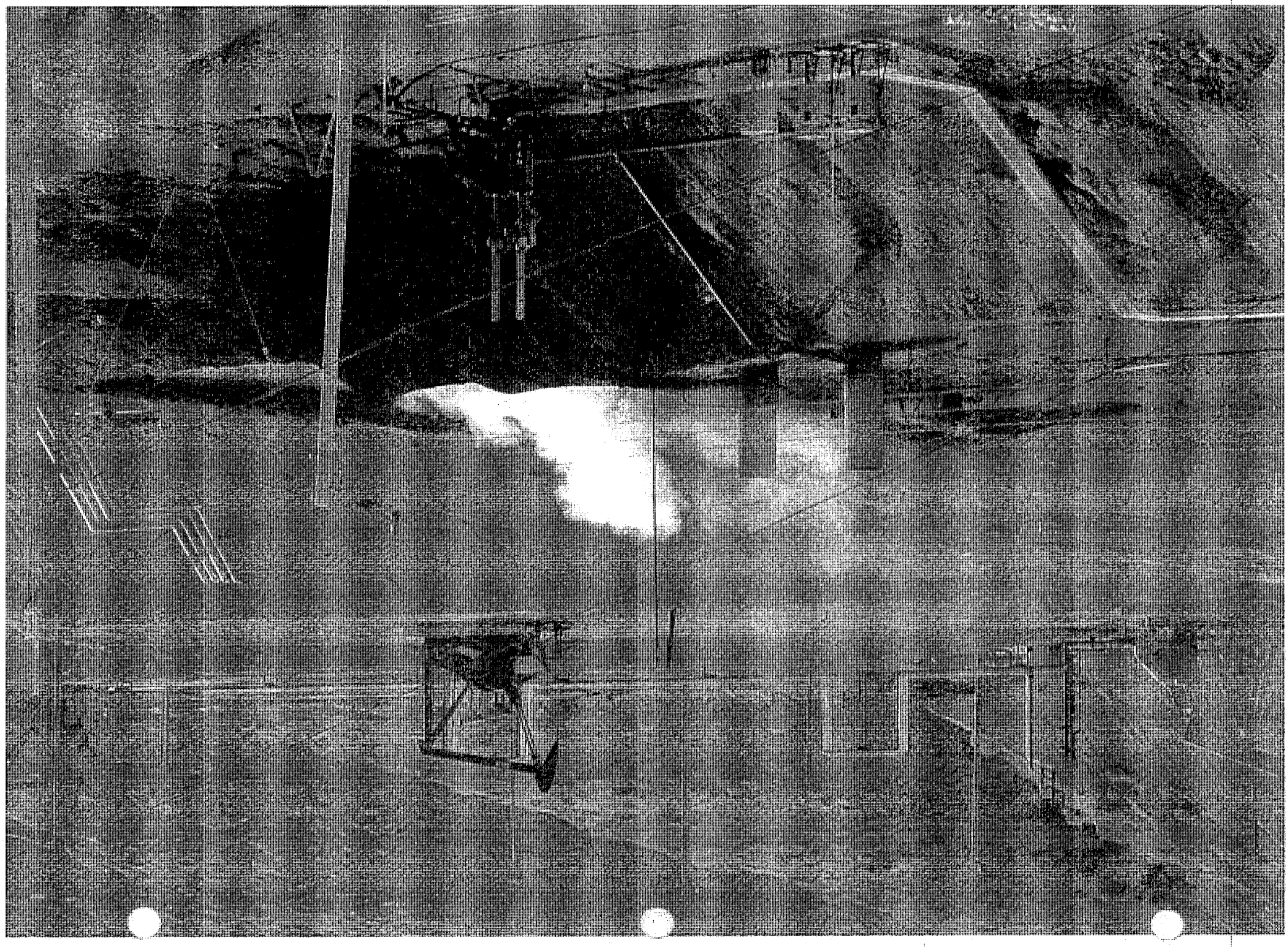
A 500' radius restriction of steam injection from this event location was in place since the August 5 site eruption for both Chevron and TRC. The nearest wells Chevron reportedly had on injection prior to August 17th event were at 766' and 988' distance. It is not known how many Chevron wells were on injection beyond a 1000' TRC reportedly had 5 wells on injection at distances of 561' to 720' and 3 wells injecting at a distance of 750' to1000'. PXP had six wells between 880' and 1150' distance on injection. Onsite field personnel reported ground trembling and that the eruptive event lasting approximately 15 to 20 seconds. Aerial steam was observed by Mr. Allen driving to the site from over the hill on Mid-Oil shortly after the event was reported by onsite personnel. A considerable amount of steam was observed by DOGGR on August 18 emitting from the crater that appeared to be an estimated 12' to15' in diameter. The activity of the smaller surface expression near the crater, reported on August 3, also increased, allowing approximately 5- 10 bbls of fluid to the surface. Mr. Allen was onsite the morning of August 18 during the DOGGR visit to the site.

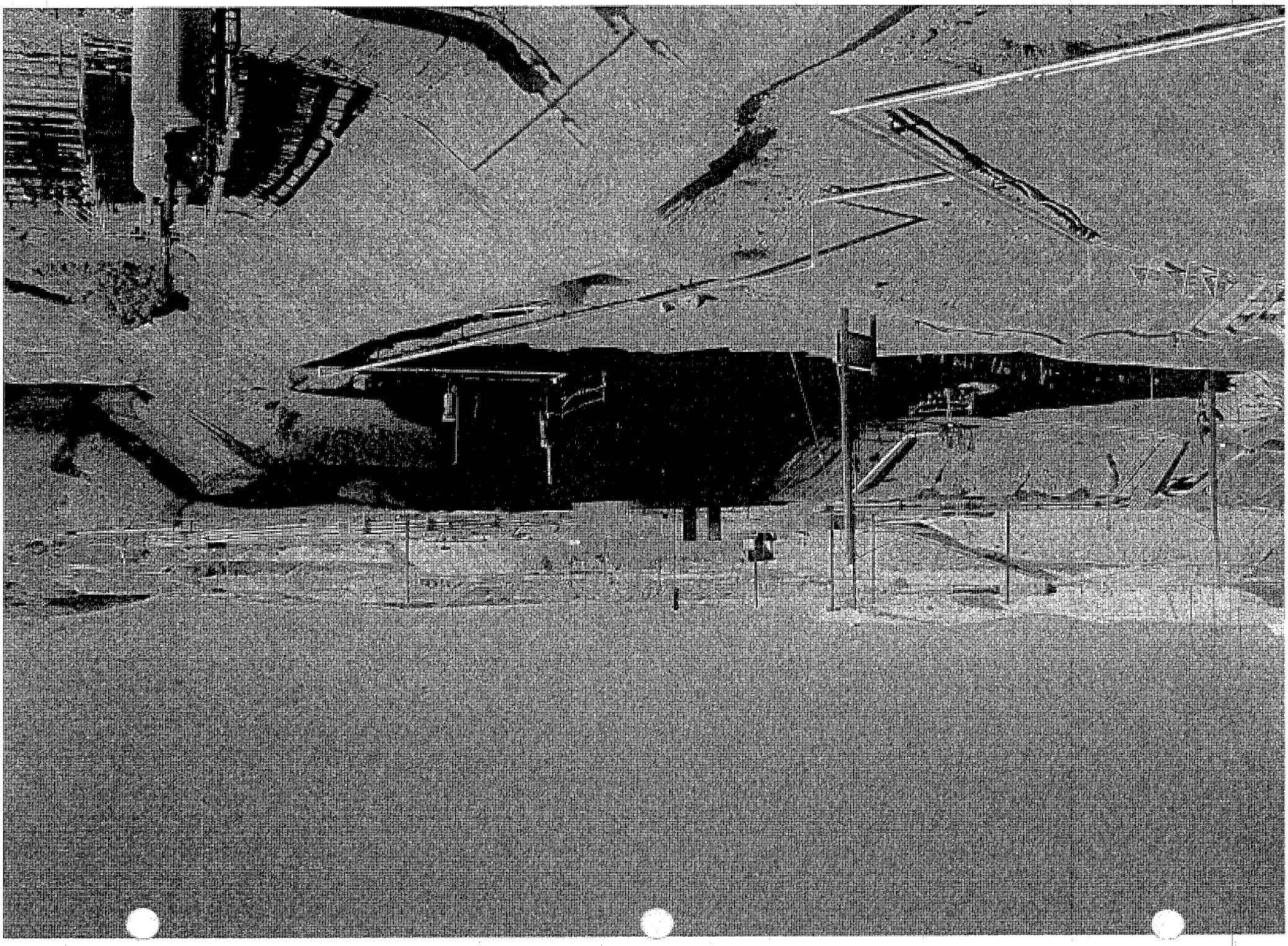
(Use reverse side if additional space is needed.)

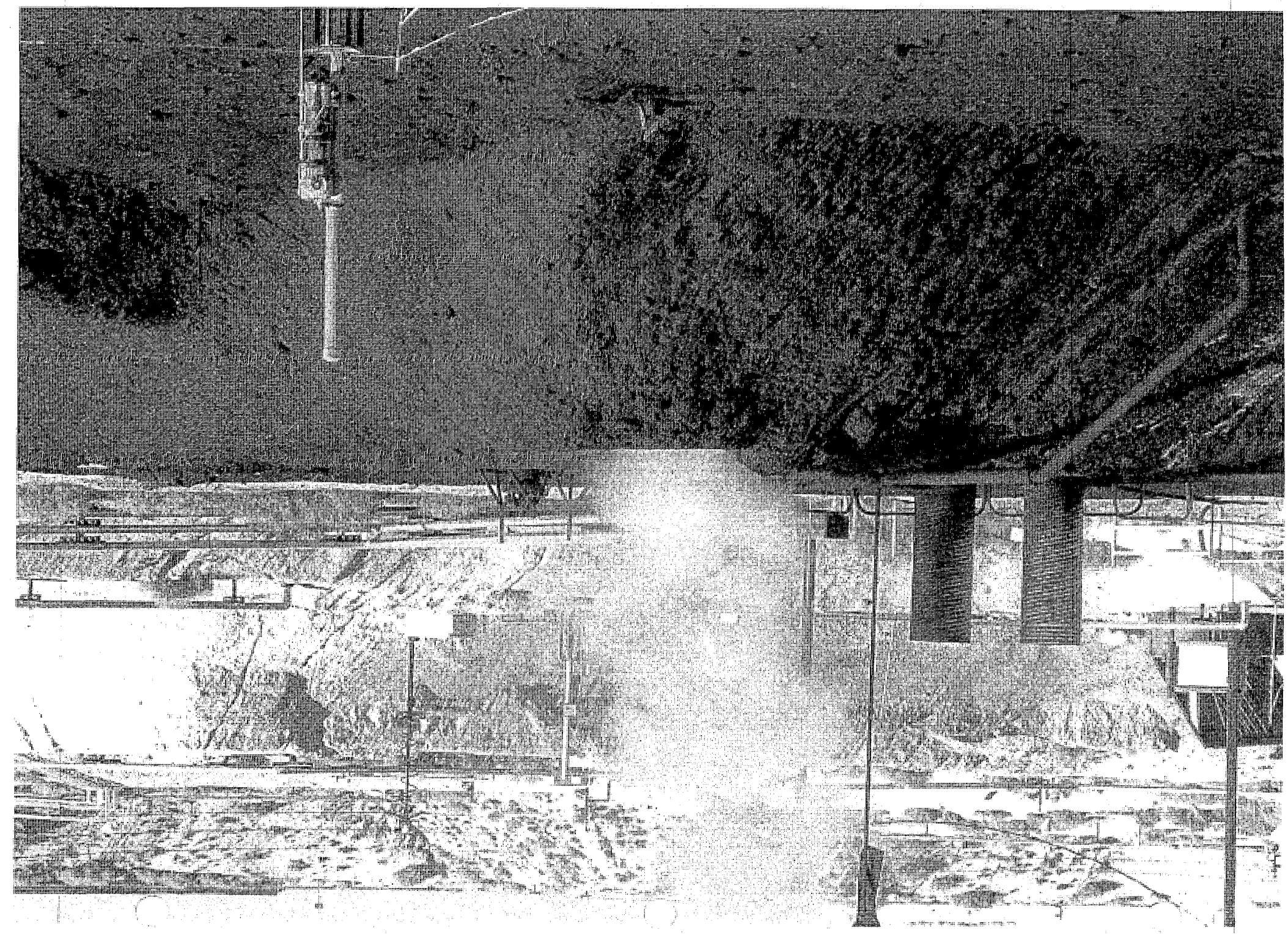
Report Prepared by Michael Toland Date 8-19-11

OG184 (3/98)

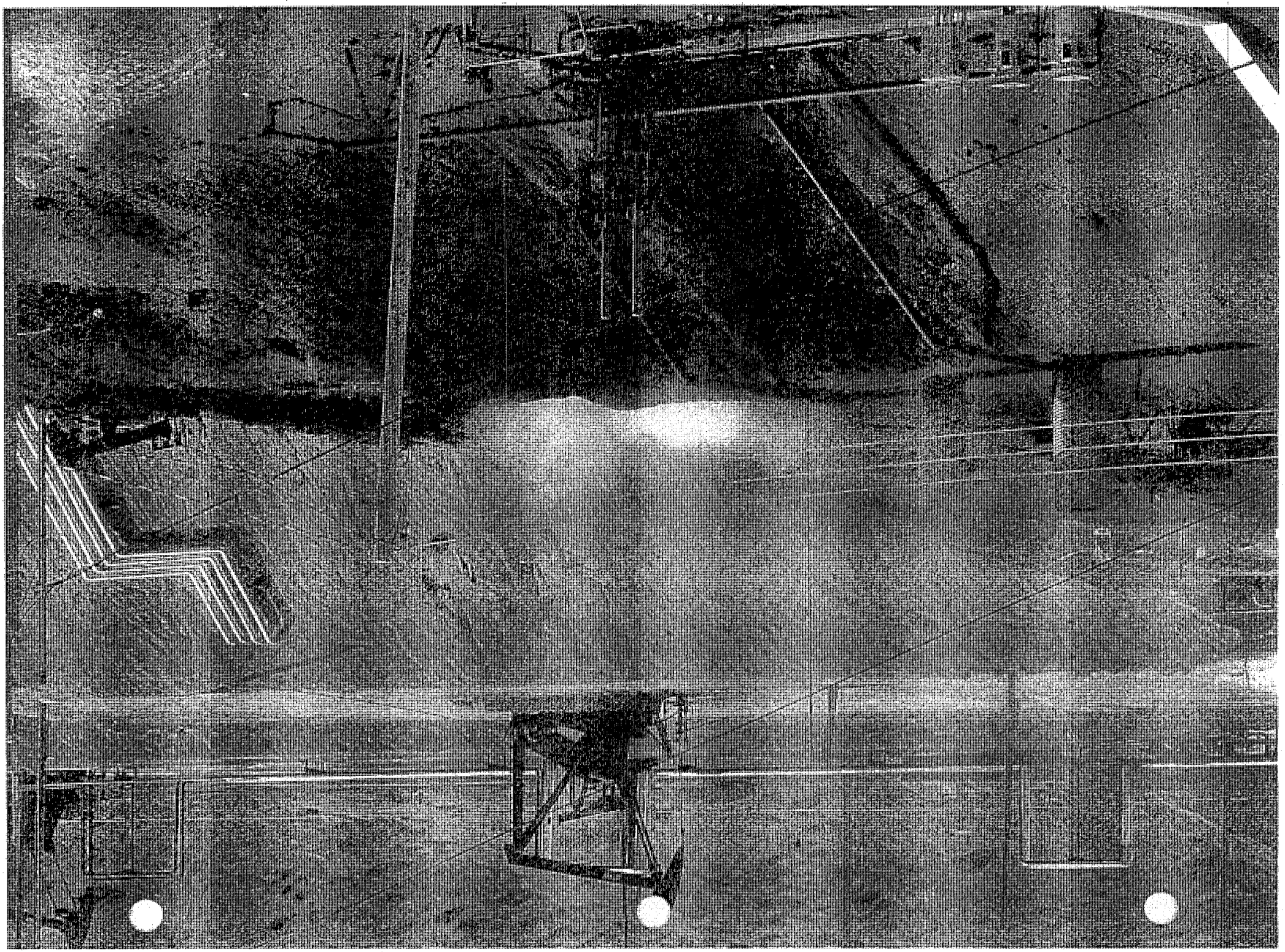


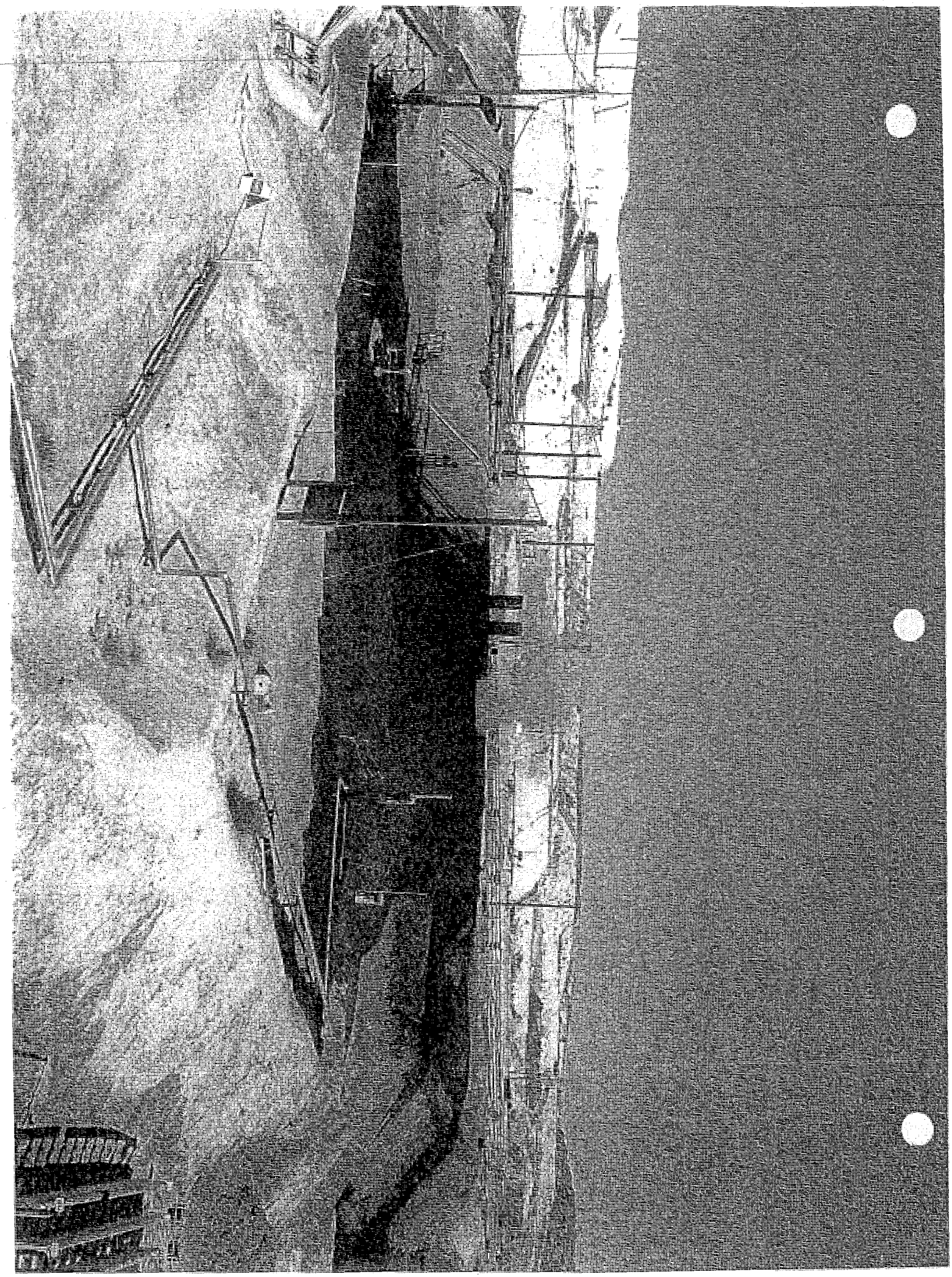


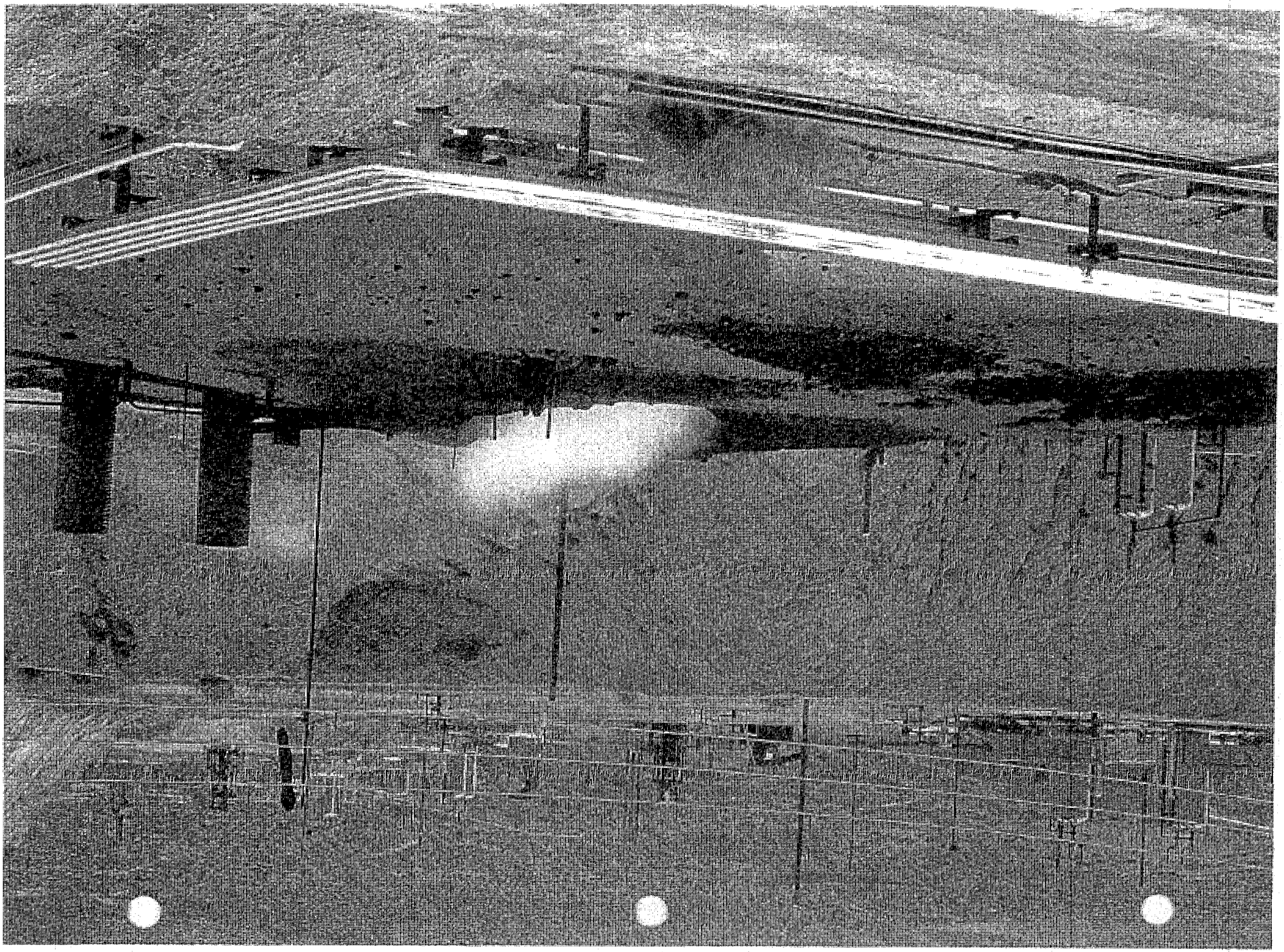


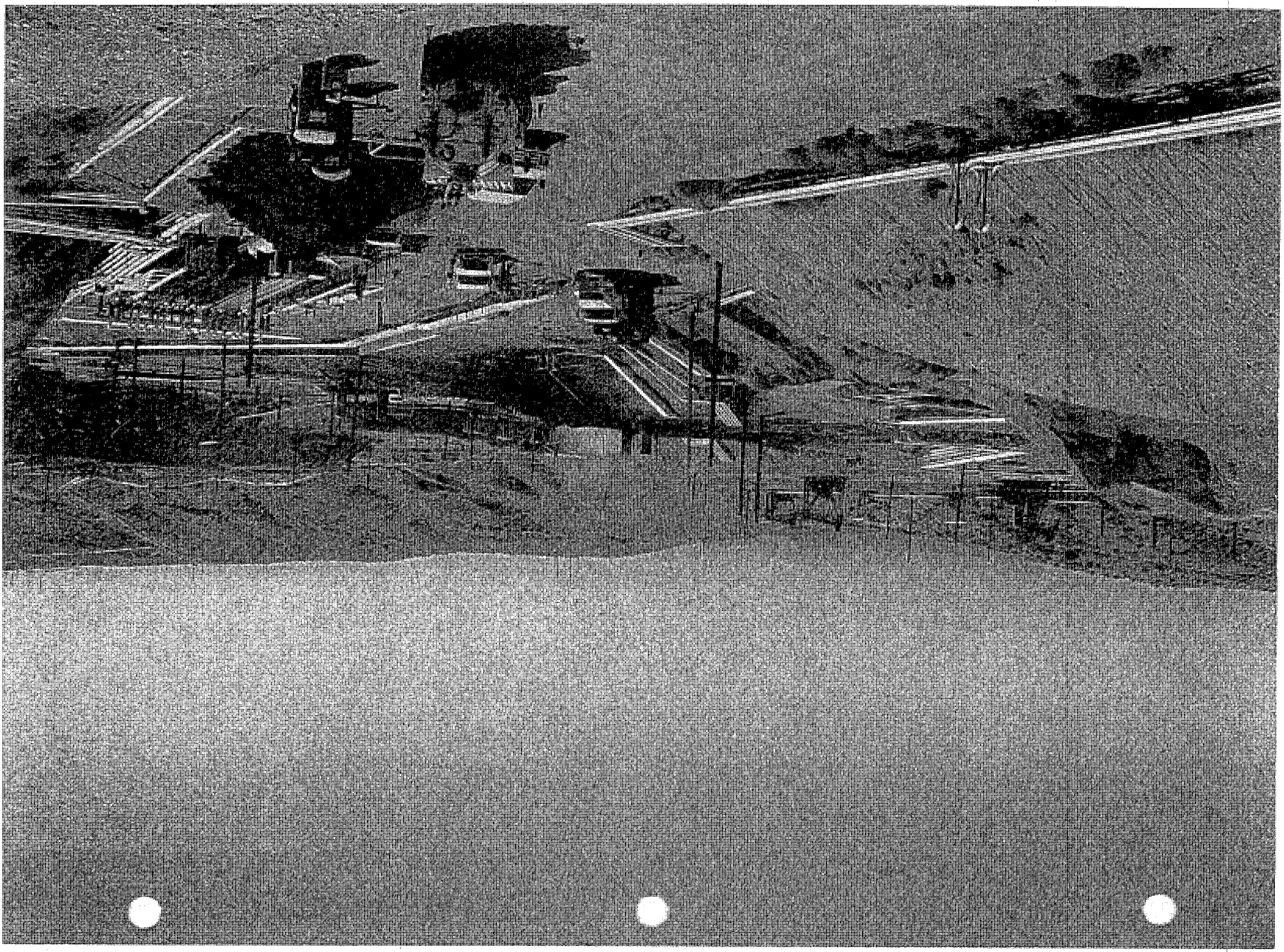


Chervon
8/25/11









Chevron
10/14/11

REPORT OF OCCURRENCE

TYPE C/D Date 10-19-11

LOCATION Midway-Sunset

Operator Chevron Representative Bob Allen Phone 661-768-3636

Occurrence Detected October 14 (month, day), 2011 (year); _____ am/pm

Occurrence Ended Ongoing (month, day), _____ (year); _____ am/pm

Field Midway-Sunset Sec., T., R. 21 32S/23E Lease and Well Section 21

Other Location Description Chevron well 20 surface expression / subsurface containment structure

O.E.S. Notified? _____ (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) Event witnessed by DOGGR during routine area visit.

Volume of Spill _____ bbls oil; _____ bbls water

Areal Extent 250-300 bbls/day of fluid . Approximately 40' x 70' Fluid released is 99% water.

Property or Waterways Damaged or Threatened N/A

Weather and Sea Conditions (Offshore Spills Only) N/A

Injuries N/A

Source and Cause of Occurrence Injection of steam above formation fracture gradient into shallow diatomite reservoir forcing steam and fluid through fractures to the surface. A subsurface containment structure was placed to capture fluid flowing to this area. Pumps designed to remove fluid from containment structure have been inoperative since mid July.

Containment and Cleanup Area is restricted to employee access by CalOSHA Fluid is being siphoned away from surface expression location through a 4" PVC pipe via vacuum truck.

Operator Plans to Prevent Reoccurrence Complete clean-up or remedial work is not expected until CalOSHA approves a Chevron site safety plan and employee entry is allowed.

Estimate of Property Damage (dollar loss) _____ or Cleanup Cost _____

Additional Information On October 14 fluid began to surface from the subsurface containment vessel place to capture fluid from the well 20 surface expression. The linear rod pumps to remove this fluid from the vessel have been inoperative since mid July and access restriction to the site has prevented repair. Fluid had been removed from the containment structure by vacuum truck until the August eruptions, after which the fluid flow the area virtually ceased.

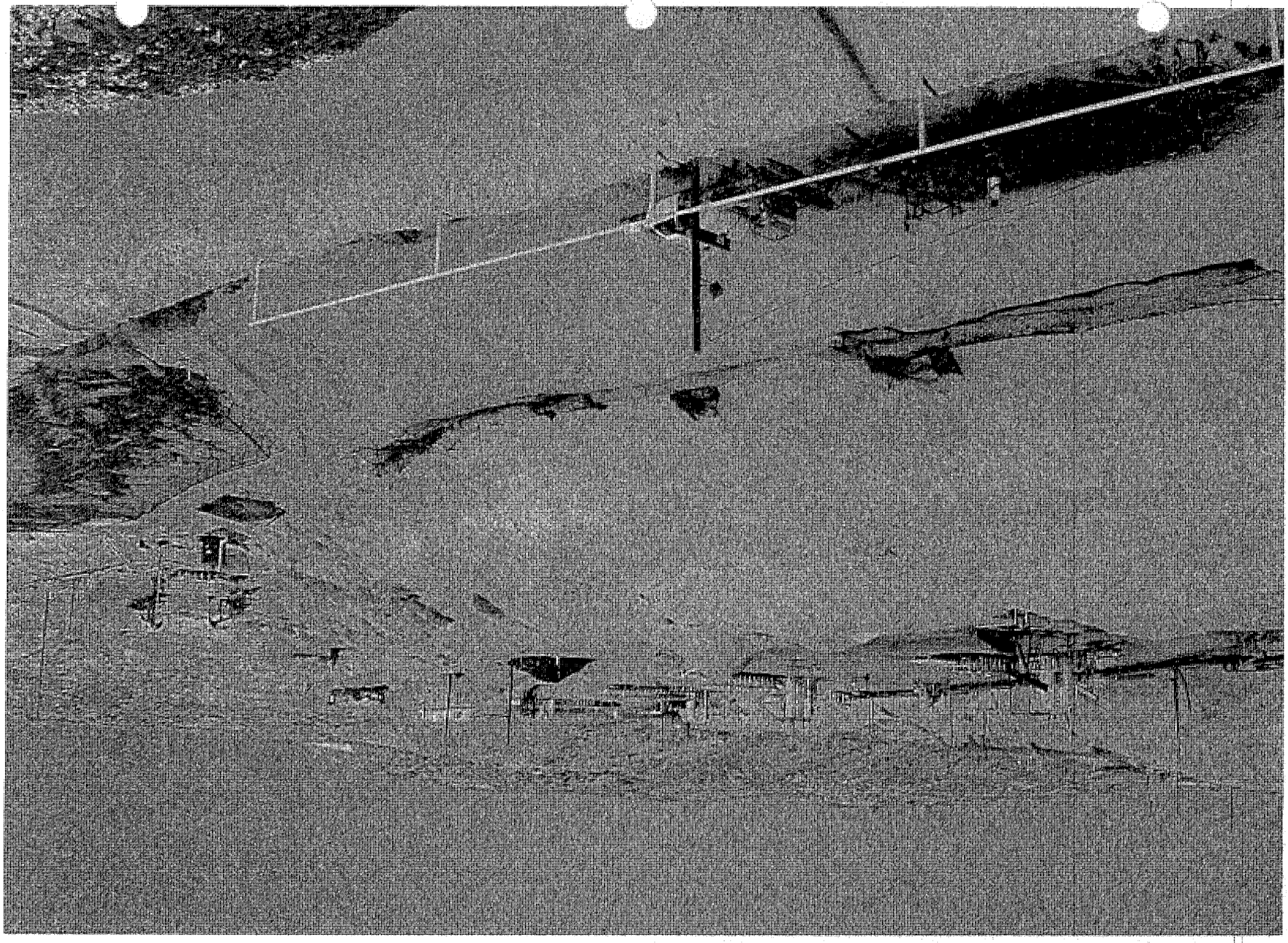
Since October 14 approximately 250-300 bbls. / day of fluid have been flowing to surface from the containment structure and is being removed from the surface by a 4" PVC pipe that was extended into the area and connected to a vacuum truck. The amount of steam coming from the well 20 surface expression crater reportedly increased significantly on October 15 and 16.

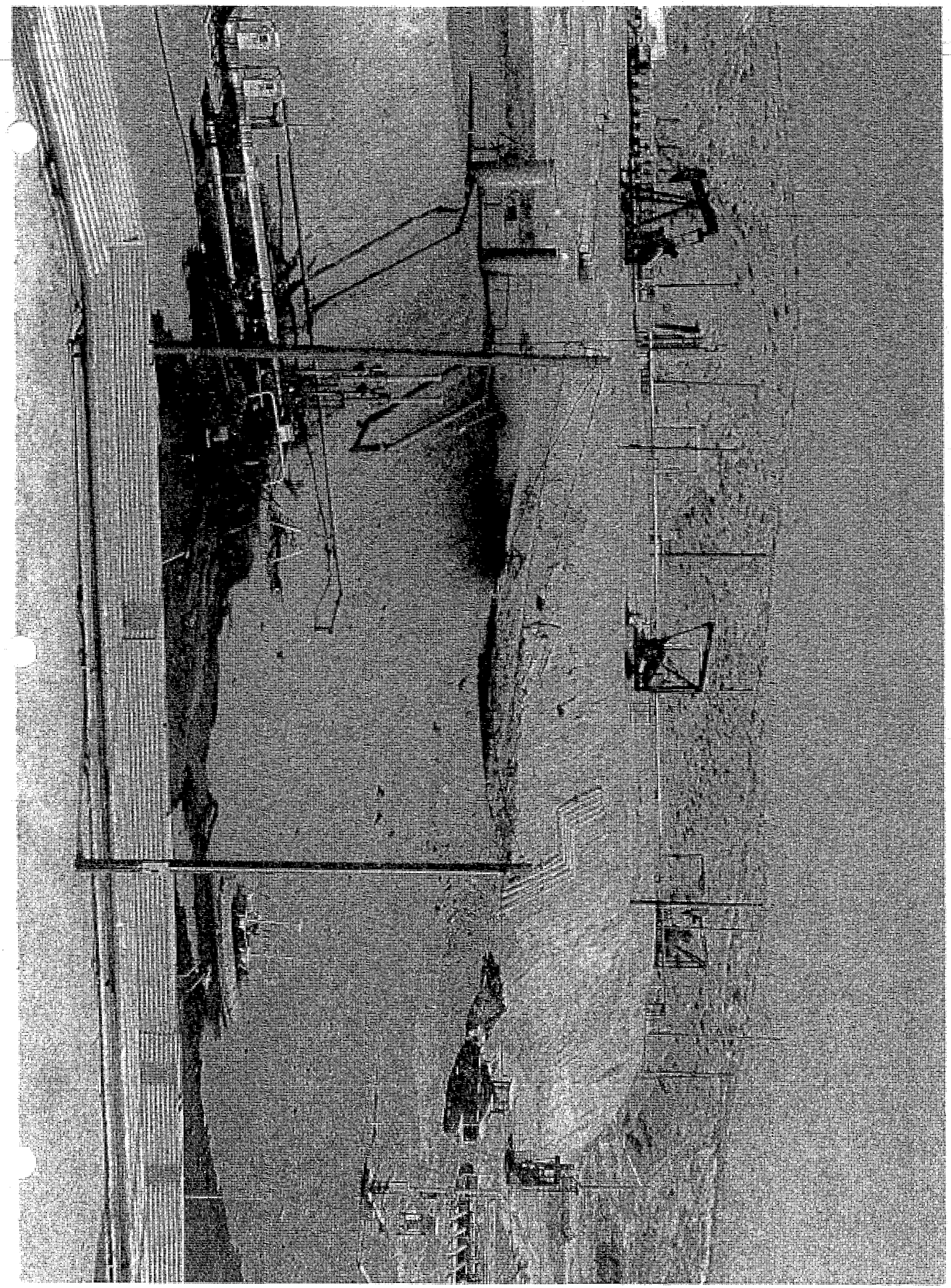
The amount of steam observed from the crater on October 19 was considered to be average.

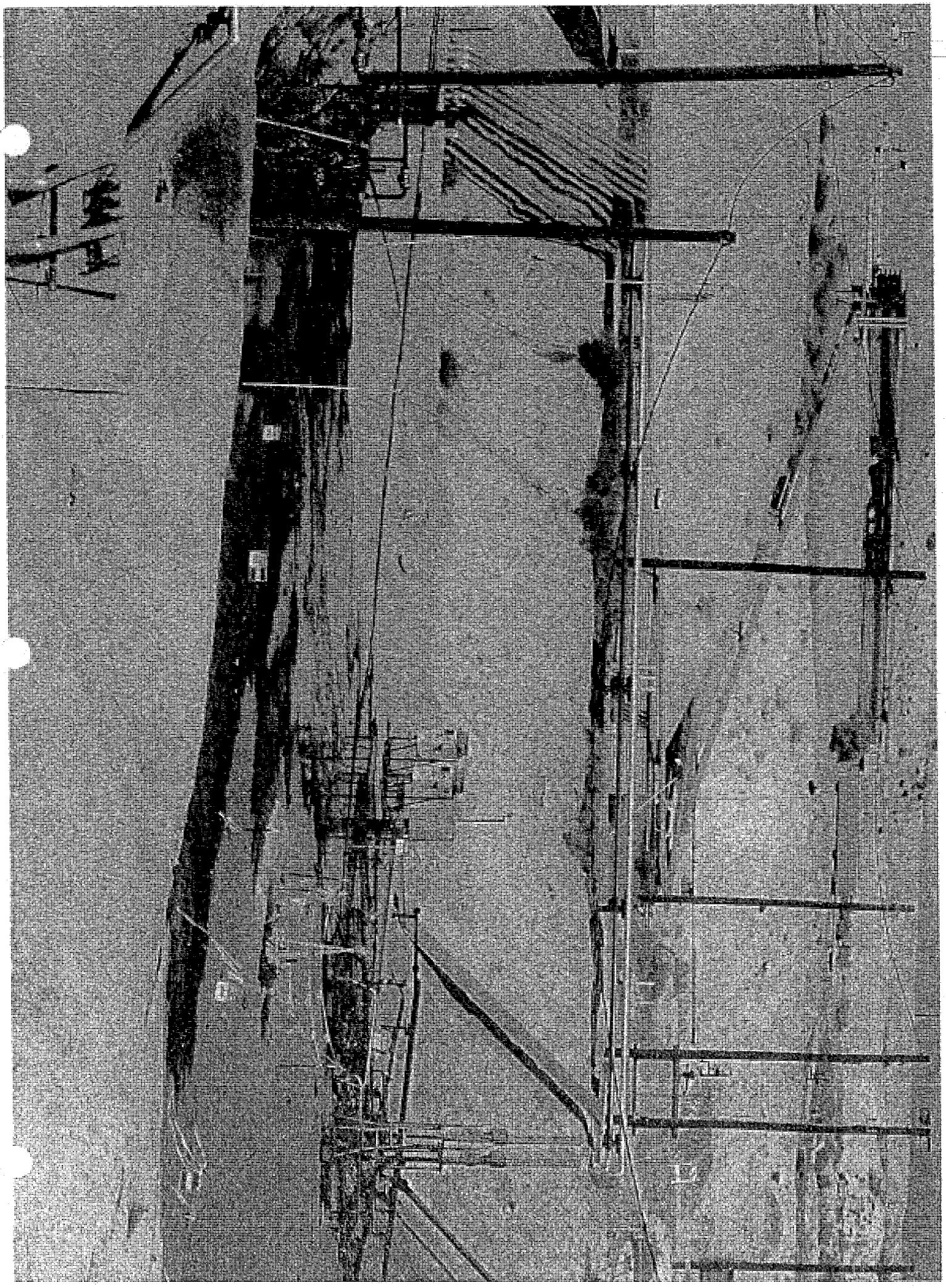
(Use reverse side if additional space is needed.)

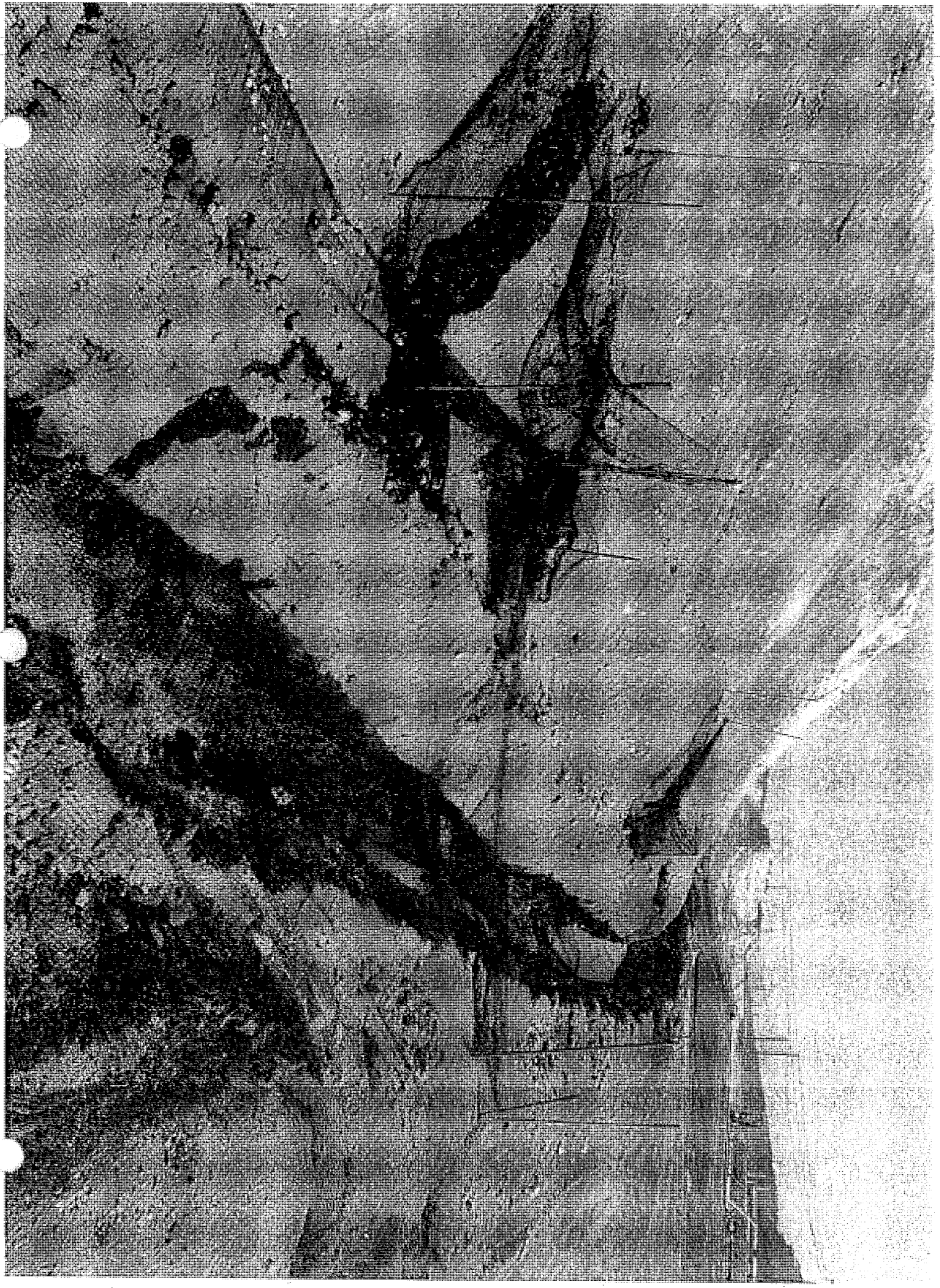
Report Prepared by Michael Toland Date 10/20/11

OG184 (3/98)

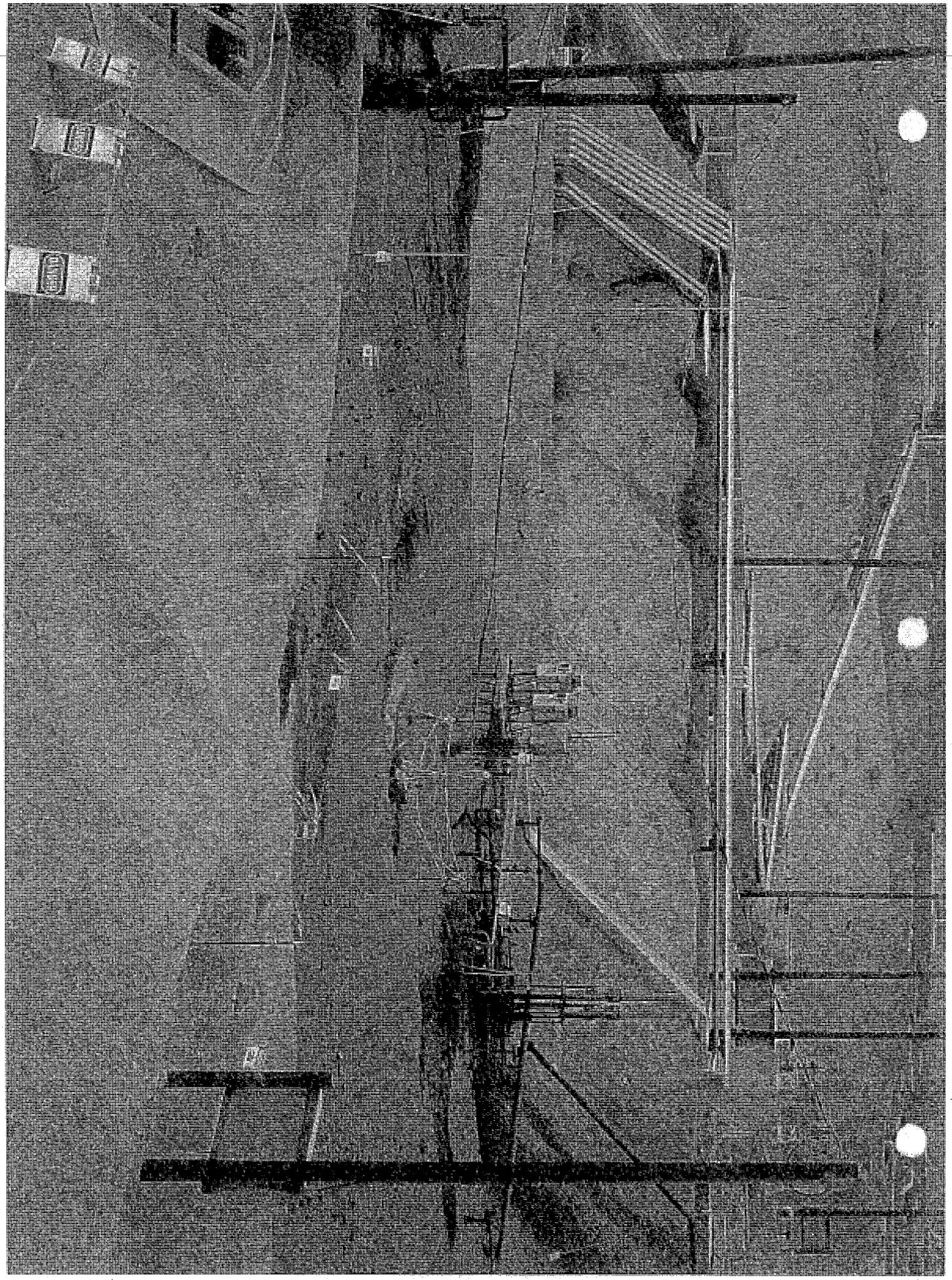


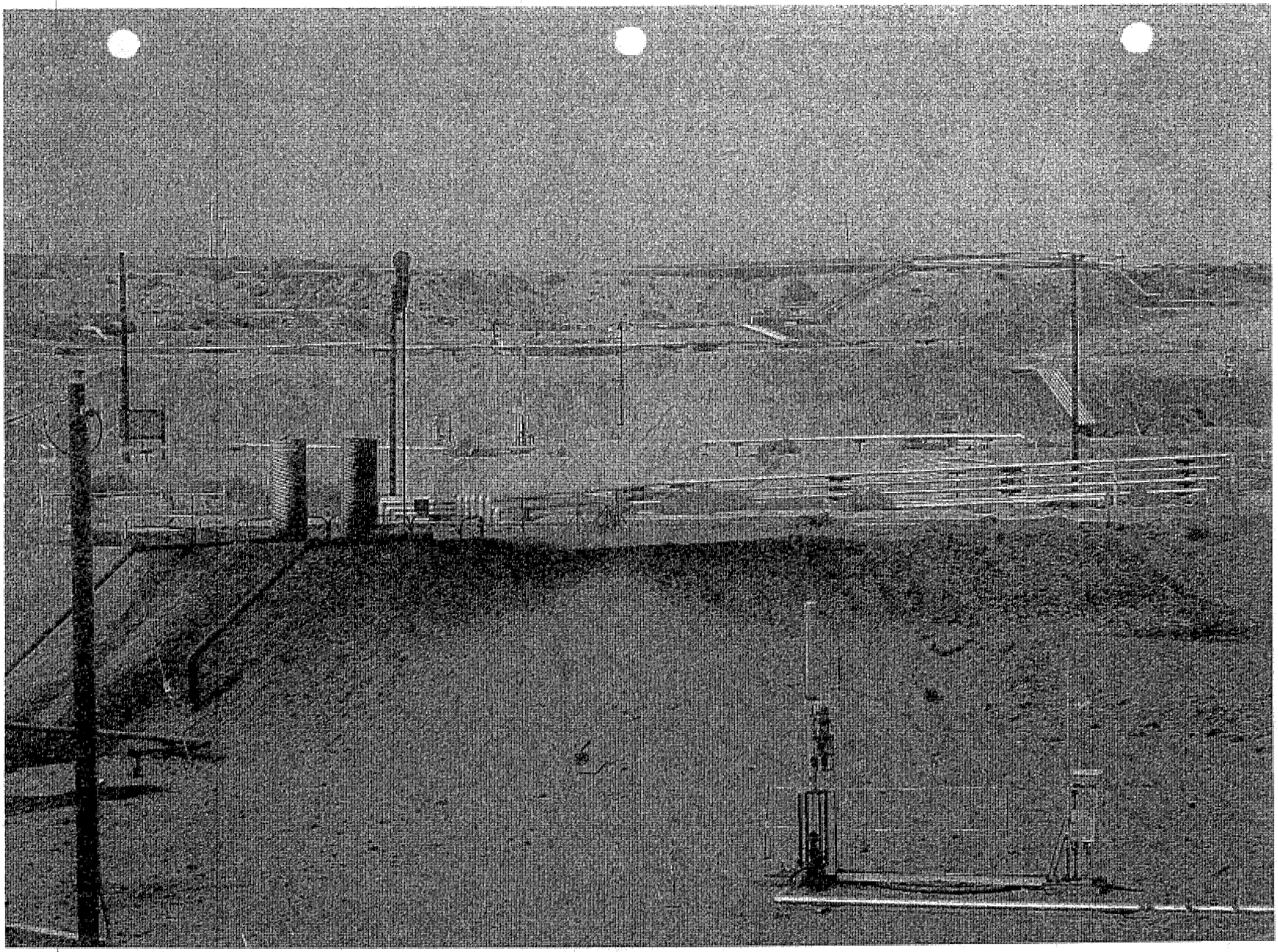




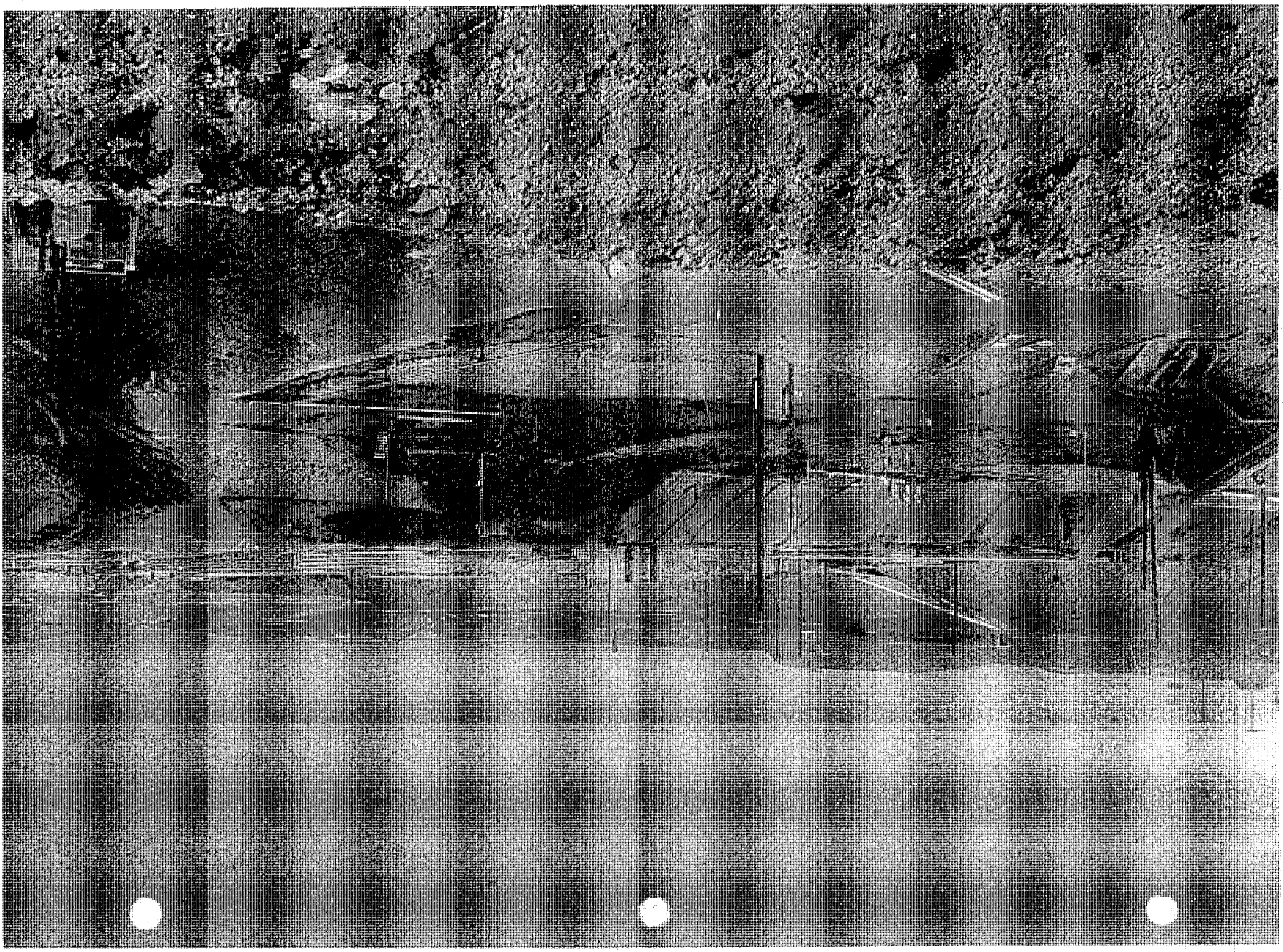


Chervon
10/24/11





Chervon
11/17/11



REPORT OF OCCURRENCE

TYPE C/D Date 6/21/11

LOCATION Midway-Sunset

Operator Berry Petroleum Representative Chuck Jaster Phone 213-7515

Occurrence Detected June 21 (month, day), 2011 (year); 0500hr am/pm

Occurrence Ended June 21 (month, day), 2011 (year); ____ am/pm

Field Midway-Sunset Sec., T., R. 2 31/22 Lease and Well Southwestern

Other Location Description Gage Setting 6, 2nd Reactivation of surface expression #24

O.E.S. Notified? Conjunction w/ 11-3705 (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) Chuck Jaster, Berry Employee, 213-7515, 0900hrs

Volume of Spill < 1 bbl bbls oil; ____ bbls water

Areal Extent 40 cu yds of formation material including oil, An 8 ft. cone formed, Spray from the event covered an area of approximately 200' x 300'

Property or Waterways Damaged or Threatened N/A

Weather and Sea Conditions (Offshore Spills Only) N/A

Injuries N/A

Source and Cause of Occurrence Steam injection into shallow diatomite reservoir resulting in surface break through of steam and formation mud. Surface expression activity ceased several hours after steam shut-in.

Containment and Cleanup Area bermed to minimize spread of formation mud. Material will be removed once it is determined it is safe to do so. The spray material along the slope will probably be left in place.

Operator Plans to Prevent Reoccurrence Four steam injection wells shut in until mechanical integrity of casing can be determined. Well numbers; 47-39, 46-40, 48-42 and 49-41. .

Estimate of Property Damage (dollar loss) ____ or Cleanup Cost ____

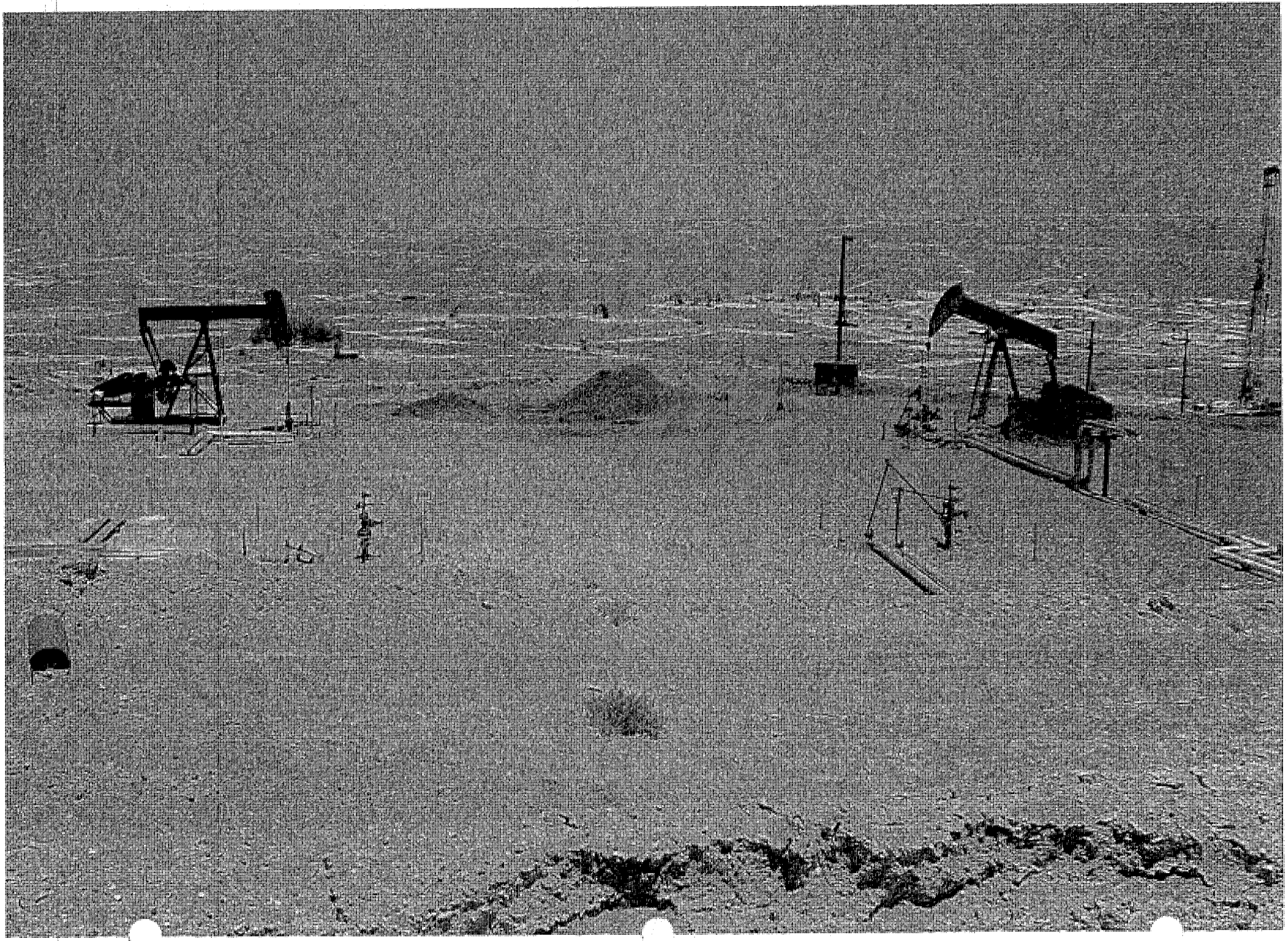
Additional Information Photos Attached

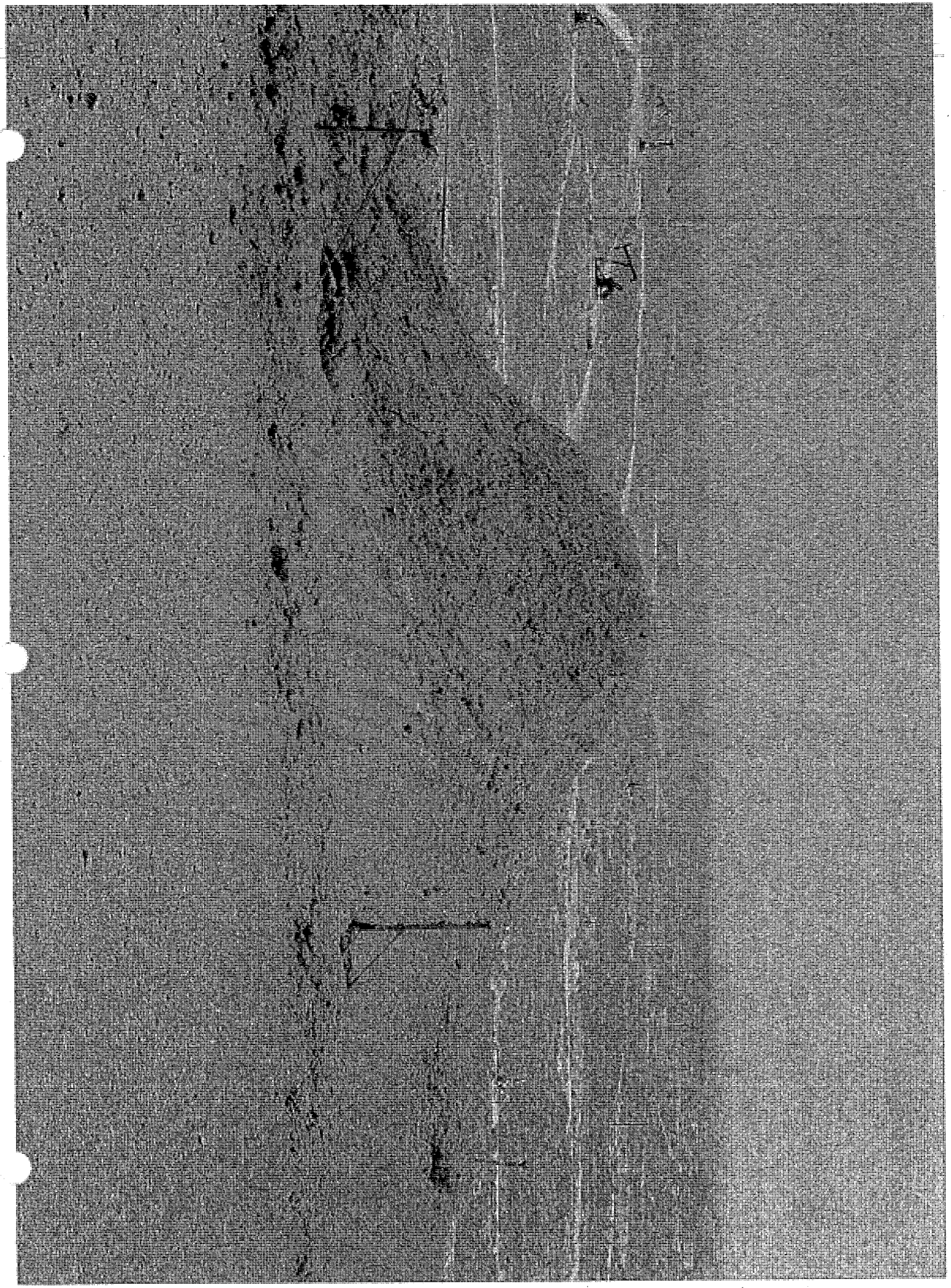
This is the 2nd reactivation of this surface expression within a week. The original surface expression occurred approximately one year ago. 4 injection wells that have the potential of being responsible for this surface expression are located nearby on the excavated terrace above the surface expression site. After the 1st reactivation limited steam resumed and by a process of elimination, Berry has narrowed the number of responsible wells to two. Steam injection will not resume in this area until mechanical integrity has been confirmed on these two wells. Production around this surface expression continues, the casing and pumping units evidently not affected by the underground movement of material or the spray of formation mud. The two wells could be turned off manually, but for safety reasons personnel are not allowed onto the location. Since remotely shutting down production to this area would also include many other wells outside of this immediate area, Berry has made the decision not to do so.

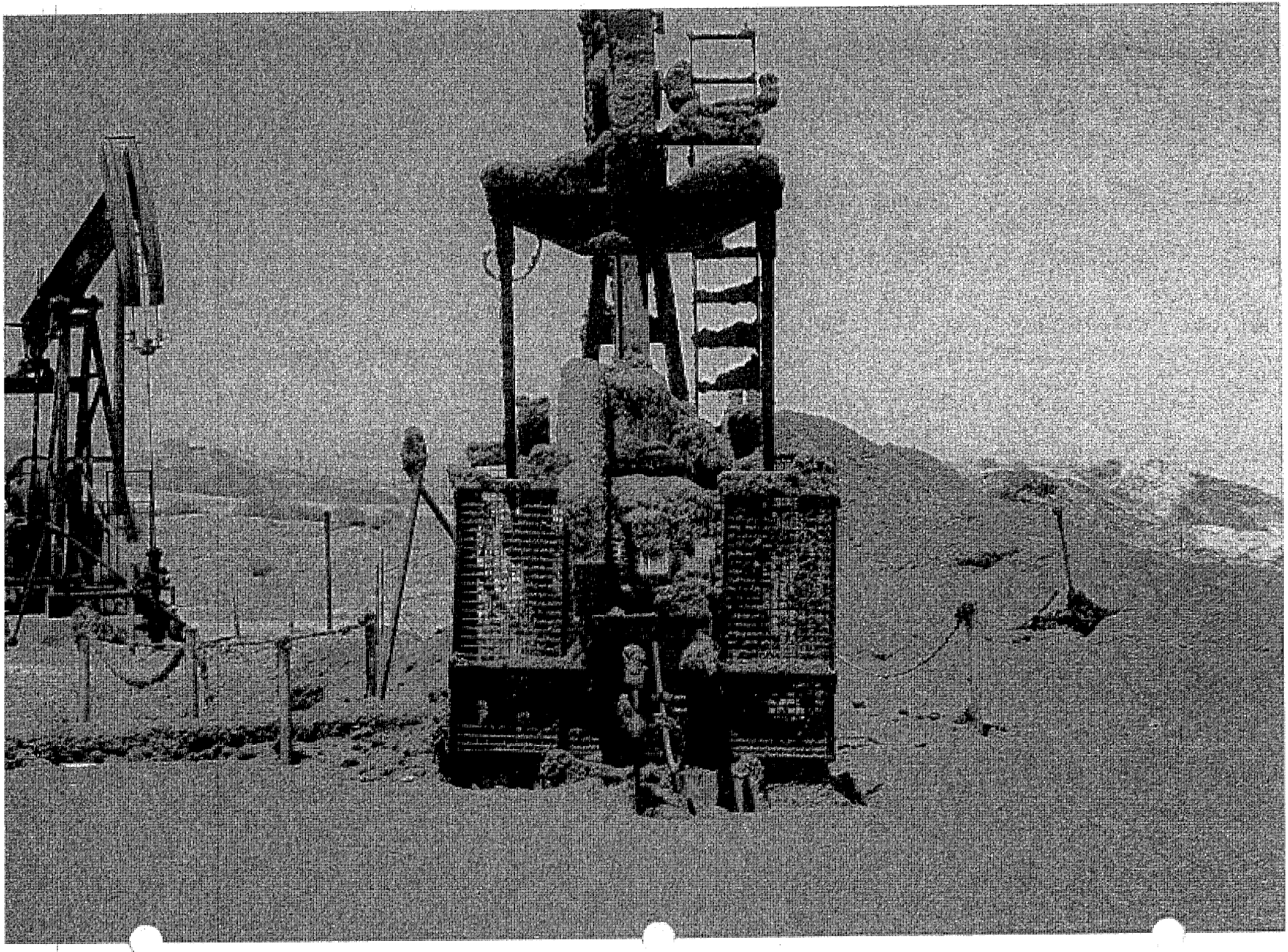
(Use reverse side if additional space is needed.)

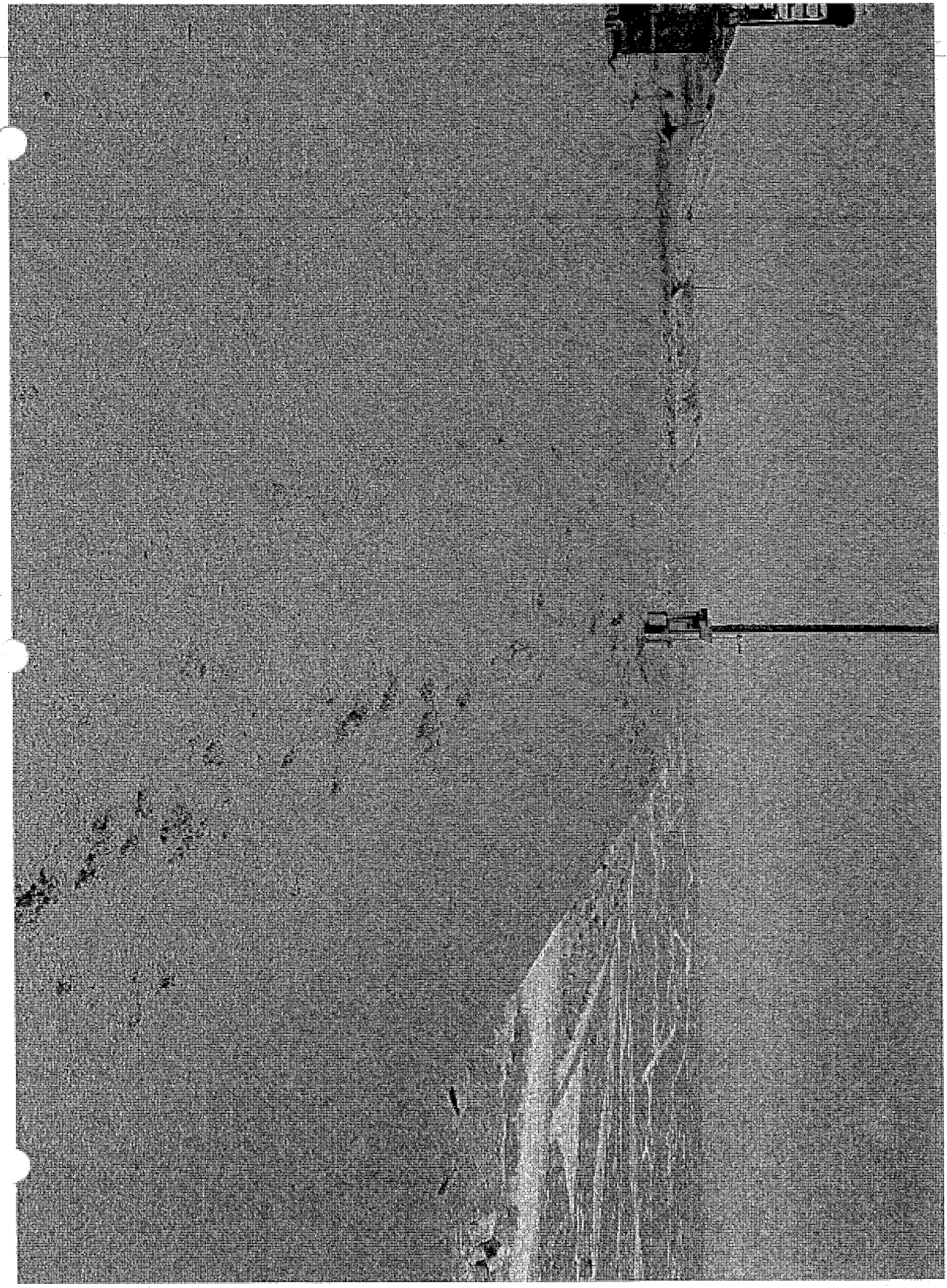
Report Prepared by Michael Toland Date 6/24/11

OG184 (3/98)









REPORT OF OCCURRENCE

TYPE C/D Date 6/21/11

LOCATION Midway-Sunset

Operator Berry Petroleum Representative Chuck Jaster Phone 213-7515

Occurrence Detected June 21 (month, day), 2011 (year); 0500hr am/pm

Occurrence Ended June 21 (month, day), 2011 (year); _____ am/pm

Field Midway-Sunset Sec., T., R. 2 31/22 Lease and Well Southwestern

Other Location Description Gage Setting 9, Surface expression #33, located on the terrace directly below surface expression #24

O.E.S. Notified? 11-3705 (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) Chuck Jaster, Berry Employee, 213-7515, 0900hrs

Volume of Spill < 1 bbl bbls oil; _____ bbls water

Areal Extent 2-3 cu yds of formation material including oil. Spray from expression effected an area approx. 40' x 70'

Property or Waterways Damaged or Threatened N/A

Weather and Sea Conditions (Offshore Spills Only) N/A

Injuries N/A

Source and Cause of Occurrence Steam injection into shallow diatomite reservoir resulting in surface break through of steam, formation mud and oil. Surface expression activity ceased several hours after steam shut-in.

Containment and Cleanup Formation mud has dried. Material will be removed once it is determined it is safe to do so.

Operator Plans to Prevent Reoccurrence 4 steam injection wells shut in. Injection to resume after determination of which injection well(s) responsible for surface expression by mechanical integrity inspection. Well numbers; 47-39, 46-40, 48-42 and 49-41

Estimate of Property Damage (dollar loss) _____ or Cleanup Cost _____

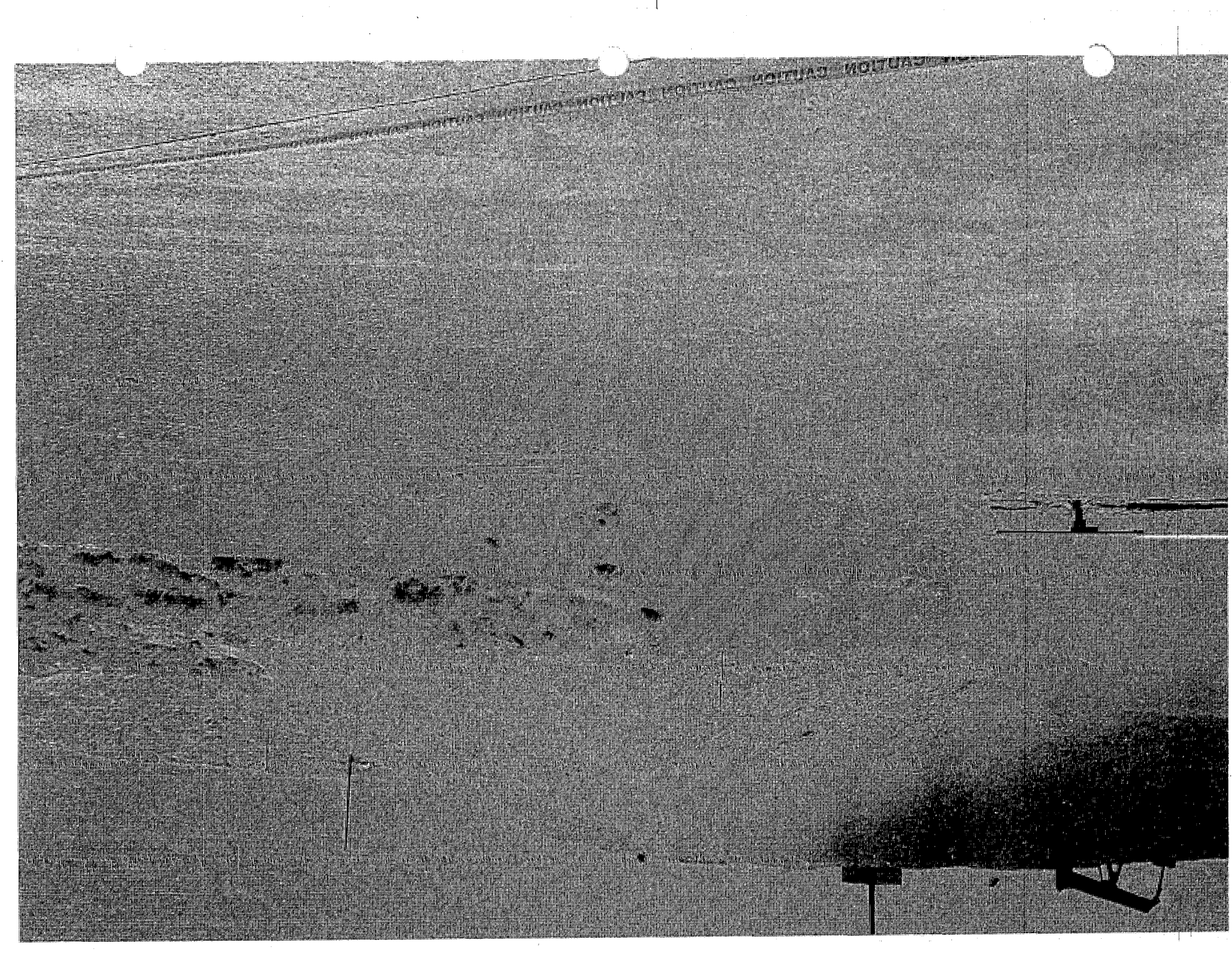
Additional Information Photos Attached

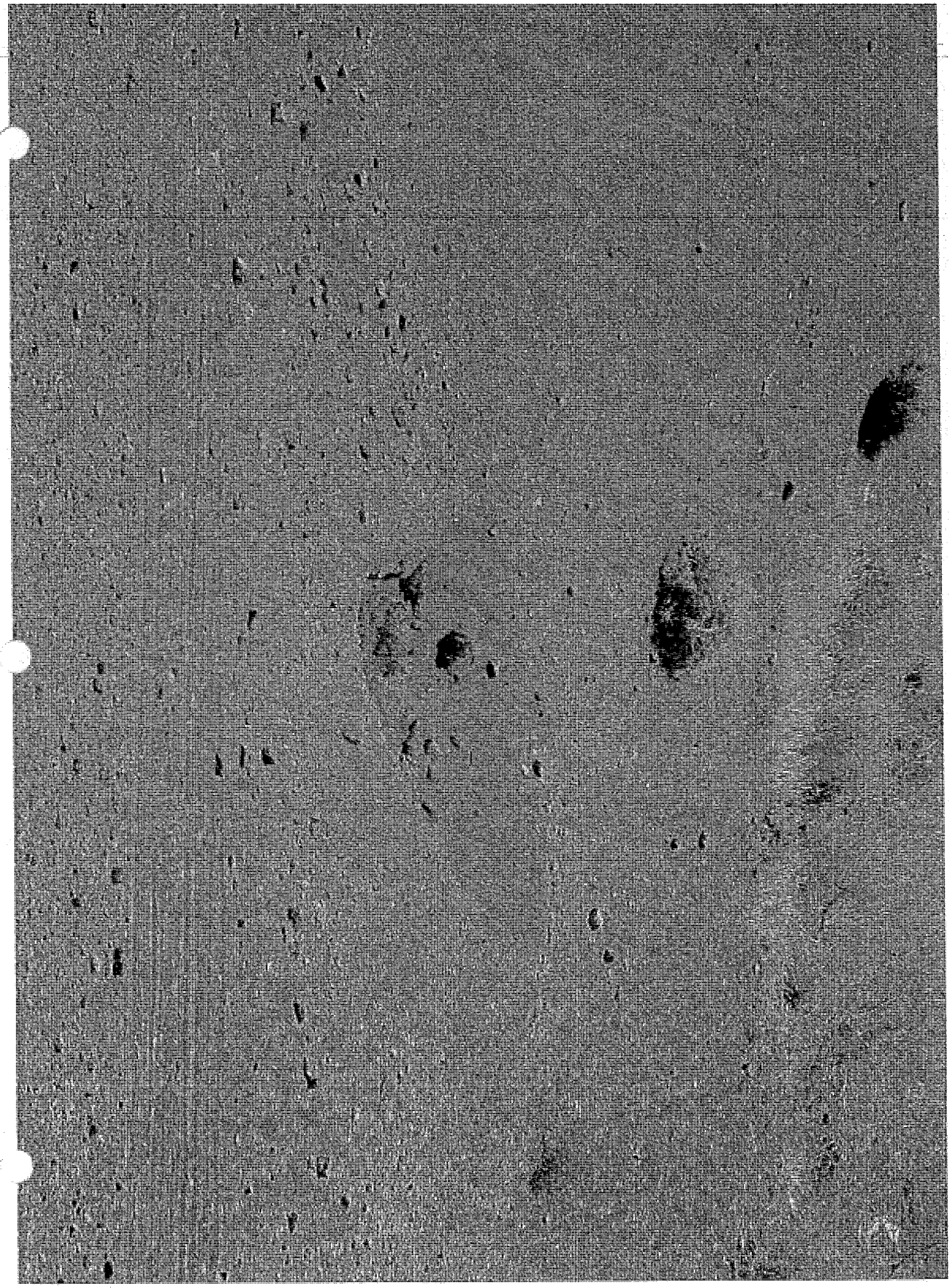
This small surface expression occurred in conjunction with the larger 2nd reactivation of surface expression #24. It was given a new number because of its location on the terrace below the reactivation. One of the photos shows the slope of the terrace with the reactivation cone on the left and the new surface expression at the base of the slope. The area around the new surface expression is restricted.

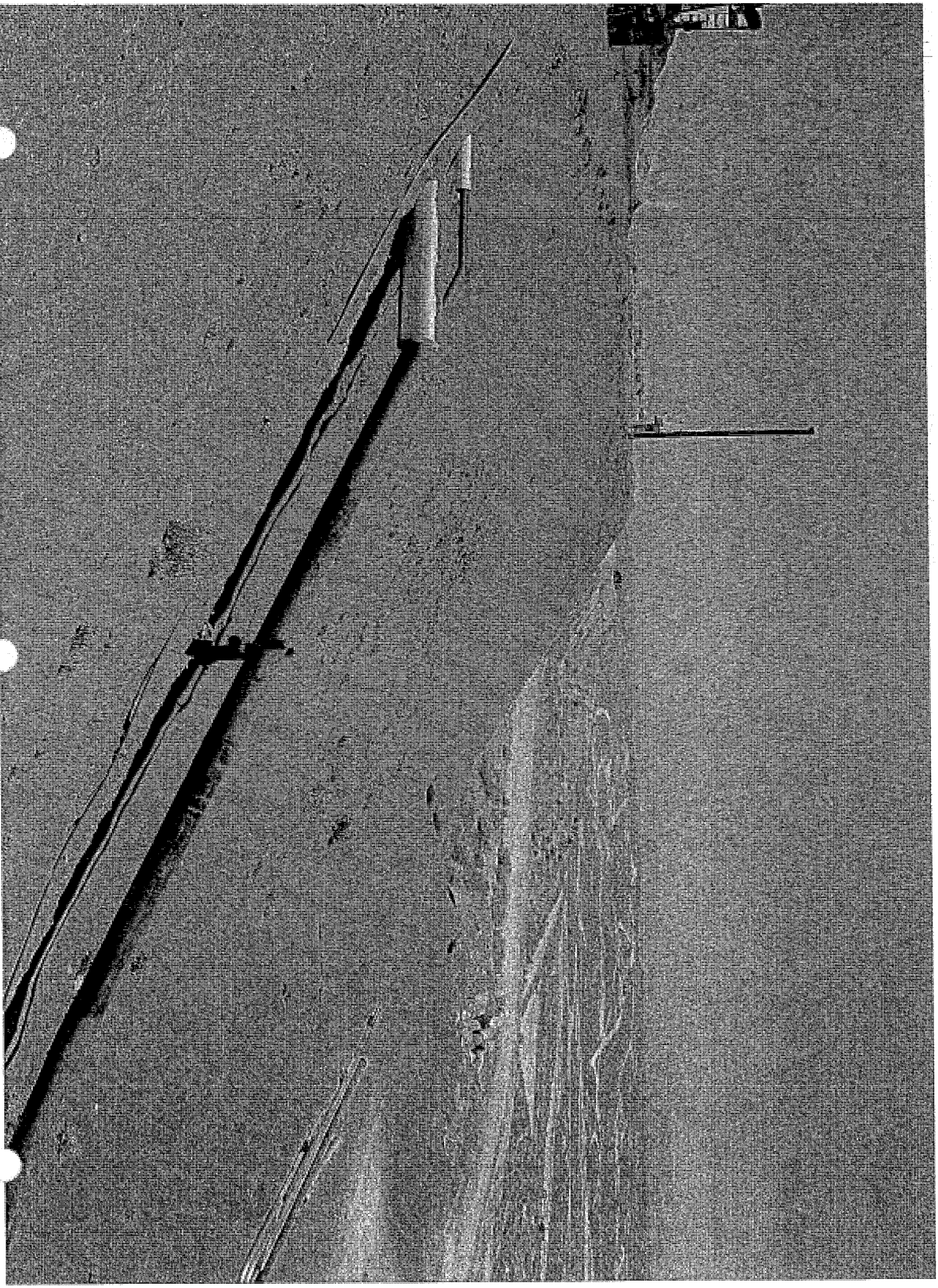
(Use reverse side if additional space is needed.)

Report Prepared by Michael Toland Date 6-24-11

OG184 (3/98)







Berry Petroleum
6/26/11

REPORT OF OCCURRENCE

TYPE C/D Date 6/26/11

LOCATION Midway-Sunset

Operator Berry Petroleum Representative Greg Juengst Phone 340-6928

Occurrence Detected June 26 (month, day), 2011 (year) ;0420hr am/pm

Occurrence Ended June 26 (month, day), 2011 (year) ;0900hr am/pm

Field Midway-Sunset Sec., T., R. 2 T31S/R23E Lease and Well Southwestern

Other Location Description Near southwestern well 52-36. This well is for reference only, it is not been cyclically steamed this year.

O.E.S. Notified? 11-3825 (toll-free number: 800-852-7550)

DOGGR Notified by (Name, Affiliation, Phone Number, and Time) Greg Juengst, Berry Employee, 768-4554, 0740 hrs

Volume of Spill +-14 bbls bbls oil; +-36 bbls bbls water

Areal Extent Fluid 120' x 20', Spray approximately 120' x 60"

Property or Waterways Damaged or Threatened N/A

Weather and Sea Conditions (Offshore Spills Only) N/A

Injuries N/A

Source and Cause of Occurrence Steam injection into shallow diatomite reservoir resulting in surface break through of water and oil.

Containment and Cleanup Oily soil to be removed and taken to mixing pad. Sight is not currently accessible for safety reasons.

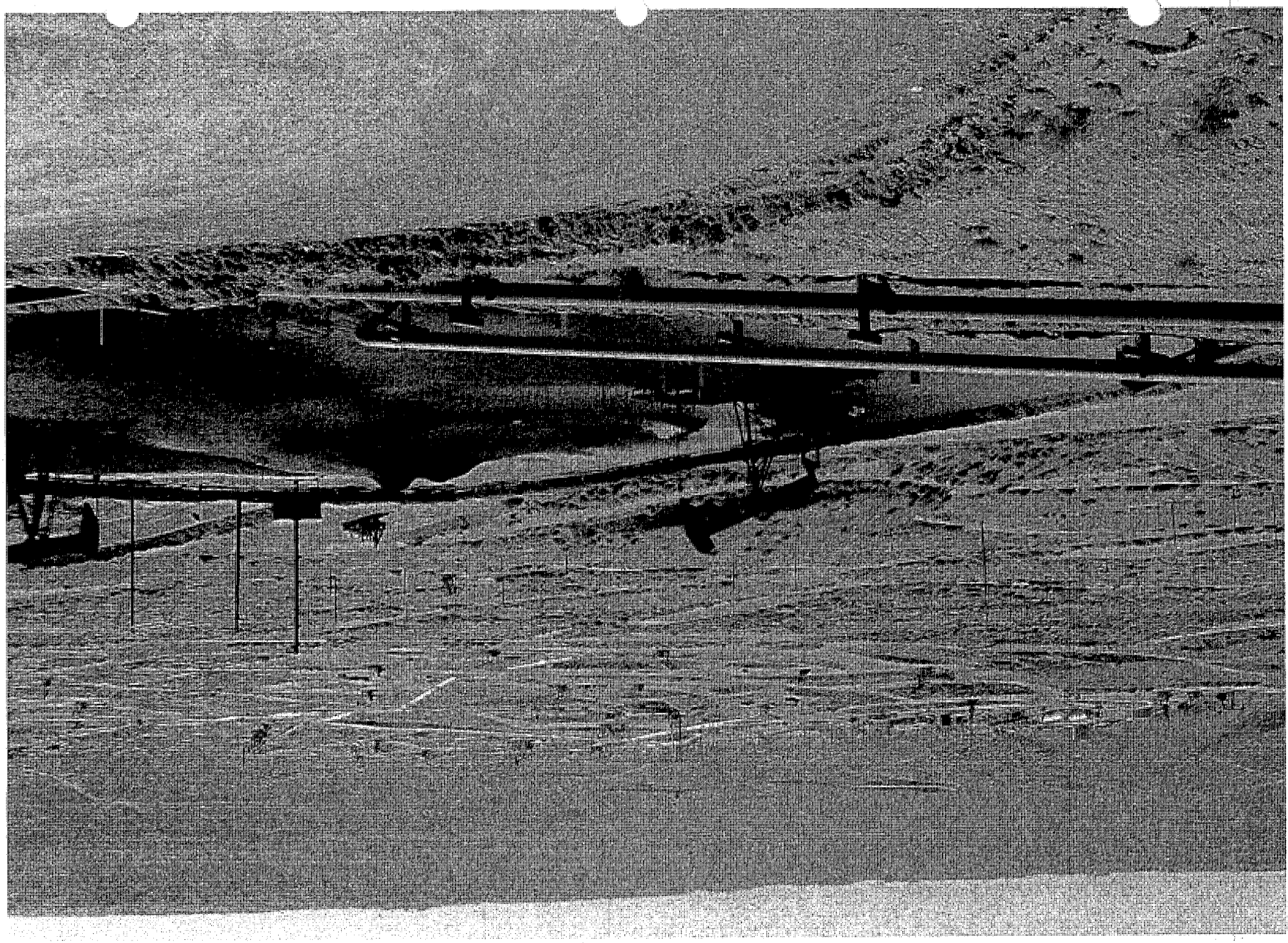
Operator Plans to Prevent Reoccurrence Review cyclic steam operations. Additional wells shut-in.

Estimate of Property Damage (dollar loss) or Cleanup Cost

Additional Information This is the third reactivation of this surface expression in two weeks. Each reactivation has been more volatile than the previous. Cobble size fragments were expelled. Fluid was released 3 times in 4 hours. Dayne Frary received call at 0740 hrs and expected the sight at 0900 hrs.

(Use reverse side if additional space is needed.)

Report Prepared by Dayne Frary & Michael Toland Date 6/26/11 & 6/28/11



Berry Petroleum
8/8/11