

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMLC063798

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other: INJECTION

2. Name of Operator

LUCID ENERGY DELAWARE, LLC

Contact: JARED R SMITH

E-Mail: jsmith@geolex.com

3a. Address

3100 MCKINNON STREET SUITE 800
DALLAS, TX 75201

3b. Phone No. (include area code)

Ph: 505-842-8000

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 13 T24S R33E Mer NMP 1600FSL 150FEL
32.214695 N Lat, 103.518009 W Lon8. Well Name and No.
RED HILLS AGI 19. API Well No.
30-025-4044810. Field and Pool or Exploratory Area
EXPLORATORY CHERRY CANYON
AGI

11. County or Parish, State

LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

On December 27, 2017 from approximately 4:00 to 8:00 pm, a step rate test was conducted by Elite Well Services and Geolex Inc. The test included eight flow rate steps from 0.25 to 5.0 BPM. The surface pressures ranged from 48 to 2,099 psi and the formation pressures ranged from 2,960 to 3,687 psi. The analysis of the step rate test data indicate that the test included at least 5 steps below and 2-3 steps above the estimated formation fracture pressure of approximately 3550-3600 psig.

A minor leak below the lubricator occurred during the last step (step 8) after the first 5 minutes. The leak was quickly and safely repaired within 5 minutes, and the test was extended to account for this down time.

Following the step rate test, the bottom hole wireline pressure and temperatures gauges were

Acid Gas Disposal pressure limited to 3310 psig at the top injection interval of 6230'

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #399652 verified by the BLM Well Information System
For LUCID ENERGY DELAWARE, LLC, sent to the Hobbs
Committed to AFMSS for processing by PAUL SWARTZ on 01/09/2018 ()

Name (Printed/Typed) JARED R SMITH

Title CONSULTANT TO LUCID ENERGY

Signature (Electronic Submission)

Date 01/04/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

01/09/17 PR Swartz

Title

TPET

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

**BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED *****KZ*

Additional data for EC transaction #399652 that would not fit on the form

32. Additional remarks, continued

replaced with a Schlumberger Optical P/T gauge on slick line, the final stage injection rate and pressure was re-established, and the well was shut in for a seven-day fall-off test.

Immediately following the step rate test the field data notes on the BLM-provided Step Rate Data Form (attached) were provided to the BLM coordinator.

STEP RATE TEST DATA for BLM

Operator: Lucid Energy Delaware, LLC

Well: Red Hills AGI #1

API#: 30-025-40448

Lease: NMLC063798

Date collected: 12/27/2017

Sfc Loc: T-24-S, R-33-E, Sec 13 1600FSL 150FWL

Tbg OD 2-7/8" Tbg Wt. 7.9

Grade P-110 PH6

Packer set at: **6190** (ft) Inj Pipe I.D.: **2.880** (in)
 Top Injection Depth: **6230** X 0.20psig/ft = Expected Surface Fracture psig: **1246**
 With Mud Wt Scale: lbs/gal Beginning Formation psig: **2960** at Depth: **6593**
 Injection fluid lbs/gal: **8.40** Hydrostatic Pressure of fluid at top depth of injection: **2719**
 Beginning Wellhead psig: **48** Target Maximum Rate - bpd(barrels per day): **7200**

1. Take a charted record of shut in psig for no less than 48 hours. If the shut in psig is above the expected fracture pressure, **the wellhead pressure will need to be bled off before beginning the Step Rate Test.**
2. Perform a minimum of seven steps, recording rate to ± 0.1 bpm and surface pressures to ± 10 psig in five minute intervals. The first two step rate pressures must be below 0.2psig/ft x depth at top of injection.
4. The last two five minute surface pressure readings of each (minimum 30 minute) step are to be within 15psig of each other. If not, hold that step injection rate past the 30 minute step until two consecutive pressure readings are within 15psig. Record the average of those two readings as the Data Point for that Step #.

Step 1							
Target Test Rate (5% of maximum bpd/1440 =				0.31 bpm pmp'd for Step 1			
				0.2500 bpm (barrels per minute) for Step 1			
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 16:10
Surface (psig):	41.00	98.00	153.00	193.00	230.00	267.00	End Time: 16:40
Formation (psig):	3194.00	3214.00	3234.00	3245.00	3254.00	3262.00	Graph Data for Point #1
bpm	0.34	0.33	0.29	0.30	0.29	0.30	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 267.00
Formation (psig):							F psig: 3262.00
bpm							bpm 0.31

Step 1 has a target bpd rate of: 360

Step 2							
Target Test Rate (10% of maximum bpd/1440 =				0.52 bpm pmp'd for Step 2			
				0.5000 bpm for Step 2			
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 16:40
Surface (psig):	333.00	379.00	430.00	471.00	472.00	482.00	End Time: 17:10
Formation (psig):	3287.00	3298.00	3305.00	3312.00	3317.00	3318.00	Graph Data for Point #2
bpm	0.50	0.51	0.51	0.53	0.53	0.53	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 482.00
Formation (psig):							F psig: 3318.00
bpm							bpm 0.52

Step 2 has a target bpd rate of: 720

Step 3							
Target Test Rate (20% of maximum bpd/1440 =				1.02 bpm pmp'd for Step 3			
				1.0000 bpm for Step 3			
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 17:10
Surface (psig):	545.00	557.00	572.00	573.00	574.00	580.00	End Time: 17:40
Formation (psig):	3351.00	3360.00	3367.00	3373.00	3378.00	3382.00	Graph Data for Point #3
bpm	1.01	1.01	1.02	1.02	1.02	1.02	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 580.00
Formation (psig):							F psig: 3382.00
bpm							bpm 1.02

Step 3 has a target bpd rate of: 1440

STEP RATE TEST DATA for BLM

Operator: Lucid Energy Delaware, LLC

Well: Red Hills AGI #1

API#: 30-025-40448

Lease: NMLC063798

Date collected: 12/27/2017

Sfc Loc: T-24-S, R-33-E, Sec 13 1600FSL 150FWL

Step 4							1.55 bpm pmp'd for Step 4
Target Test Rate (30% of maximum bpd/1440 = 1.5000 bpm for Step 4)							
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 17:40
Surface (psig):	672.00	675.00	685.00	690.00	700.00	700.00	End Time: 18:10
Formation (psig):	3411.00	3422.00	3432.00	3439.00	3444.00	3450.00	Graph Data for Point #4
bpm:	1.55	1.54	1.55	1.54	1.55	1.55	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 700.00
Formation (psig):							F psig: 3450.00
bpm:							bpm 1.55

Step 4 has a target bpd rate of: 2160

Step 5							2.06 bpm pmp'd for Step 5
Target Test Rate (40% of maximum bpd/1440 = 2.0000 bpm for Step 5)							
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 18:10
Surface (psig):	807.00	803.00	830.00	818.00	835.00	850.00	End Time: 18:40
Formation (psig):	3470.00	3481.00	3490.00	3497.00	3504.00	3510.00	Graph Data for Point #5
bpm:	2.06	2.06	2.07	2.07	2.06	2.06	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 850.00
Formation (psig):							F psig: 3510.00
bpm:							bpm 2.06

Step 5 has a target bpd rate of: 2880

Step 6							2.99 bpm pmp'd for Step 6
Target Test Rate (60% of maximum bpd/1440 = 3.0000 bpm for Step 6)							
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 18:40
Surface (psig):	1072.00	1078.00	1089.00	1102.00	1111.00	1119.00	End Time: 19:10
Formation (psig):	3534.00	3546.00	3555.00	3562.00	3568.00	3574.00	Graph Data for Point #6
bpm:	3.00	2.99	3.00	2.99	2.99	2.96	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 1119.00
Formation (psig):							F psig: 3574.00
bpm:							bpm 2.99

Step 6 has a target bpd rate of: 4320

Step 7							4.14 bpm pmp'd for Step 7
Target Test Rate (80% of maximum bpd/1440 = 4.0000 bpm for Step 7)							
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 19:10
Surface (psig):	1502.00	155.00	1540.00	1588.00	1551.00	1561.00	End Time: 19:40
Formation (psig):	3582.00	3605.00	3615.00	3625.00	3633.00	3641.00	Graph Data for Point #7
bpm:	4.14	4.13	4.13	4.14	4.14	4.14	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 1561.00
Formation (psig):							F psig: 3641.00
bpm:							bpm 4.14

Step 7 has a target bpd rate of: 5760

STEP RATE TEST DATA for BLM

Operator: Lucid Energy Delaware, LLC

Well: Red Hills AGI #1

API#: 30-025-40448

Lease: NMLC063798

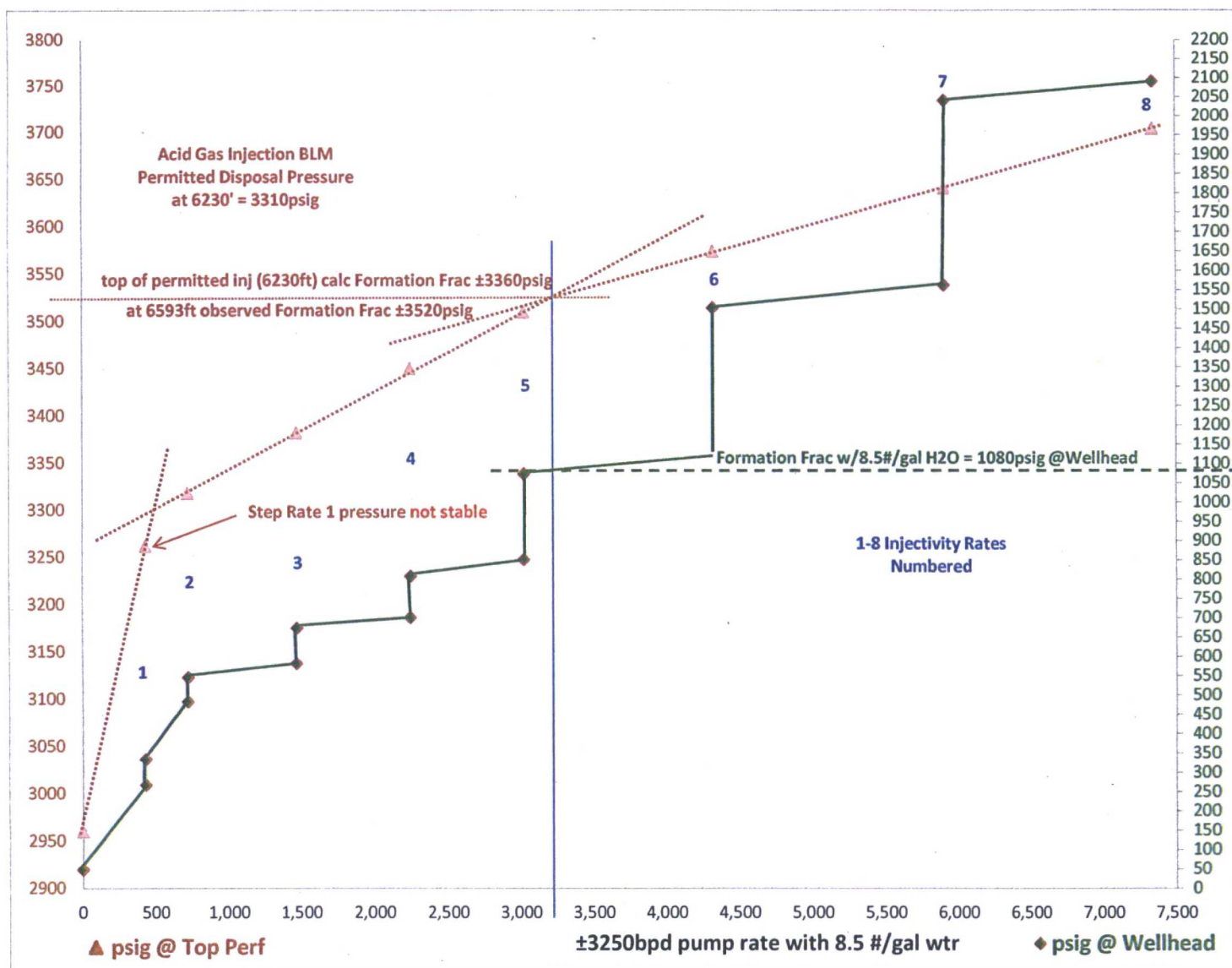
Date collected: 12/27/2017

Sfc Loc: T-24-S, R-33-E, Sec 13 1600FSL 150FWL

Step 8							5.18 bpm pmp'd for Step 8
Target Test Rate (100% of maximum bpd/1440 =							5.0000 bpm for Step 8
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 19:40
Surface (psig):	2040.00	shutdown	2033.00	2017.00	2060.00	2099.00	End Time: 20:20
Formation (psig):	3582.00	shutdown	3642.00	3662.00	3675.00	3687.00	Graph Data for Point #8 Sfc psig: 2090.00 F psig: 3704.00 bpm 5.18
bpm:	5.12	shutdown	5.23	5.19	5.32	5.12	
Time:	35 min	40 min	45 min	50 min	55 min	60 min	
Surface (psig):	2100.00	2090.00					
Formation (psig):	3696.00	3704.00					
bpm:	5.16	5.11					

Step 8 has a target bpd rate of: 7200

	Surface	Formation	
Instant Shut In Pressure:	1990	3704	psig
5 minute Shut In Pressure:	800	3680	psig
10 minute Shut In Pressure:	783	3661	psig
15 minute Shut In Pressure:	767	3643	psig



		Rate bpm	Rate bpd	psig @ Top perf	psig @ Wellhead		
Data collected: 12/27/17		Beg (w/static psig)	0.0	0	2960	48	Calculated Disposal Fluid Wt. - lbs/gal: 8.5
Operator: Lucid Energy Delaware, LLC	UnStablized Step 1	0.3	432	3262	267	Instant Shut In Pressure at Surface - psig: 1990	
Well: RED HILLS AGI-1	Beg Step 2, Sfc	0.3	432		333	ISIP at Formation - psig: ?????	
Sfc Loc: T24S-R33E, 13.1600s150e	Stablized Step 2	0.5	720	3318	482	From Chart - Surface psig @ Fracture: 1080	
API#: 3002540448	Beg Step 3, Sfc	0.5	721		545	Current Permitted Produced Wtr Sfc psig: 1246	
Lease: LC063798	Stablized Step 3	1.0	1469	3382	580	sfc Frac psig - 50psig = Maximum WH psig: 1030	
Order: R-13507-e R-13507-e, 11/09/17	Beg Step 4, Sfc	1.0	1470		672	Produced water gradient to top perf psig/ft: 0.17	
Pkr @: 6190	Stablized Step 4	1.6	2246	3450	700	Max Acid Gas psig at top Disposal Depth: 3310	
Tbg ID: 2.3230	Beg Step 5, Sfc	1.6	2247		807		
Frmtn: Cherry Cyn Cherry Cyn, 6200-653	Stablized Step 5	2.1	3024	3510	850		
Top Inj: 6230	Beg Step 6, Sfc	2.1	3025		1072		
Btm Inj: 6585	Stablized Step 6	3.0	4320	3574	1119		
	Beg Step 7, Sfc	3.0	4321		1502		
	Stablized Step 7	4.1	5904	3641	1561		
	Beg Step 8, Sfc	4.1	5905		2040		
	Stablized Step 8	5.1	7344	3704	2090		

There are two wellbores within a half mile of the Acid Gas Disposal Well. The source of the disposal acid gas will be Lucid's gas processing plant. The proposed well will need to be confirmed structurally sound by a federal APD for completion purposes. See well summary spread sheet below. Potential horizontal lateral well completion conflicts have been indicated and the near wellbore distance computed. At this time BLM has limited issues/objections for this well's use as a acid gas disposal well.

Operator: Lucid Energy Delaware, LLC

Well: Redhills AGI - 01

300 ... API: 2540448

Legal Surface Loc: T24S-R33E,13.1600s150e

@ Measured T.D.: 6650

C-108 BLM Index Tag #: EE6

BLM Review Date: 10/05/2017

NMOCD Form C-108 Date: not

Administrative Order(s) : R-13507a-e, 11/19/14

Formation, Depth, Press: Cherry Canyon, 6230-6585, 1246psig, 3.5"tbg

WDW Right of Way No:

Estate - Sfc/Mnrls/Lse: P\F\F

Surface Lease: LC063798

Com Agreement No:

Unit Agreement No:

Surface Lease: LC063798									± Direction from WDW Wellhead	± Dist from WDW Wellhead	VWDW to Lateral(s)				Evaluate disposal formation isolation from existing and potential productive formations. Confirm casing cement tops of existing wells that penetrate the proposed disposal interval are a minimum of 200ft above that interval. Consider and insure adequate isolation of vertical and calculated short distances from the proposed disposal entry to wells whose surface/bottom hole location is within the one half mile buffer.
Com Agreement No:															
Unit Agreement No:															
Well #	Short API#	Estate Sfc/Mn/Lse	SPUD Date	Status	Date Plugged	VTD	Depth Conflict	TOC	± Horz Short Dist to Lateral	top P Wtr Inj ±slope Dist	btm P Wtr Inj ±slope Dist				
AGI-1	2540448	P\F\F	10/23/13	SI AGI		6650		?							
ard-1	2508371	P\n\	2/24/61	POW	03/08/61	5425		?	N17°W-	1794					
IMS-1	2526958	P\n\P	4/13/81	P&A	08/15/11	15007	Yes	?	N21°W-	1839	Well plg'd 12/26/07, replg'd 08/15/11 (sqz'd Cherry Cyn & plgs above, Poor rpt).				
OM-2	2526369	P\n\P	9/15/79	P&A	10/08/90	14698	Yes	?	N79°E-	1987	Plg'd 10/08/90, replg'd 11/21/12 (from 2565 only, not reaching the Cherry Cyn objective).				
004H	2541384	P\n\F	6/1/14	POW		11103	Yes	?	N9°W-	3547	1782	5189	4857		
001H	2541687	P\F\F	2/1/15	POW		10944	Yes	?	N13°E-	3602	2609	5388	5080		
OM-1	2525604	F\F\F	10/3/77	PGW	12/30/04	17625	Yes	?	N64°E-	3873	NMOCD agreed to delay replugging 5 yrs by R-13507d on 07/18/2012.				
003H	2541383	P\n\F	8/30/14	POW		11155	Yes	?	N28°W-	3958	3931	6301	6028		
002H	2541666	P\F\F	2/24/15	POW		10927	Yes	?	N30°E-	4030	4025	6186	5921		
ard-1	2527491	P\F\F	10/19/81	POW	08/10/86	15120	Yes	?	S31°E-	4160	Rqrmnt to replg removed by R-13507a because of distance from AGI Well 07/18/2012.				
002H	2541382	P\n\F	6/3/14	POW		11067	Yes	?	N43°W-	4730	4592	6669	6416		
003H	2541688	P\F\F	8/3/14	POW		11052	Yes	?	N47°E-	5086	4472	6576	6321		
001H	2540914	P\n\P	3/15/13	POW		11034	Yes	?	N52°W-	5699	4601	6652	6401		
004H	2541689	P\F\F	7/2/14	POW		10877	Yes	?	N56°E-	6166	4576	6522	6274		
001H	2541026	P\n\S	4/24/13	POW		10950	Yes	?	N59°W-	6788	4657	6630	6383		
OM-1	2534050	P\F\F	10/23/97	PGW	03/13/02	13840	Yes	?	N79°W-	8743					