

Surface Use Plan
COG Operating, LLC
Crazy Horse Federal #1H
SL: 330' FNL & 190' FWL Lot #1
Section 18, T19S, R32E
BHL: 380' FNL & 330' FEL UL A
Section 18, T19S, R32E
Lea County, New Mexico

30-025-41389

Surface Use & Operating Plan

Crazy Horse Federal #1H

- Surface Tenant: Richardson Cattle Co., P O Box 487, Carlsbad, NM 88221.
- New Road: 700'
- Flow Line: on well pad
- Facilities: will be constructed on well pad – see Exhibit 3

Well Site Information

V Door: East

Topsoil: North

Interim Reclamation: North and East

Notes

Onsite: On-site was done by Legion Brumley (BLM); Gerald Herrera (COG) on June 25, 2013.

SEP 16 2013

HOBBS OCD
SEP 06 2013
RECEIVED

SURFACE USE AND OPERATING PLAN

1. Existing & Proposed Access Roads

- A. The well site survey and elevation plat for the proposed well is attached with this application. It was staked by Harcrow Surveying, Artesia, NM.
- B. All roads to the location are shown on the Location Verification Map Exhibit 2. The existing lease roads are illustrated and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling the well will be done where necessary. The road route to the well site is depicted in Exhibit #2. The road shown in Exhibit #2 will be used to access the well.
- C. Directions to location: See 600 x 600 plat
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease. Roads will be maintained according to specifications in section 2A of this Surface Use and Operating Plan.

2. Proposed Access Road:

The Location Verification Map shows that that 700' of new access road will be required for this location. If any road is required it will be constructed as follows:

The maximum width of the running surface will be 14'. The road will be crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

- A. The average grade will be less than 1%.
- B. No turnouts are planned.
- C. No culverts, cattleguard, gates, low water crossings or fence cuts are necessary.
- D. Surfacing material will consist of native caliche. Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be hauled from the nearest BLM approved caliche pit.

3. Location of Existing Well:

The One-Mile Radius Map shows existing wells within a one-mile radius of surface hole location and the bottom hole location.

4. Location of Existing and/or Proposed Facilities:

- A. COG Operating LLC does not operate an oil production facility on this Lease.
- B. If the well is productive, contemplated facilities will be as follows:
 - 1) A tank battery and facilities will be constructed as shown on Exhibit 3.
 - 2) The tank battery and facilities including all flow lines and piping will be installed according to API specifications.
 - 3) Any additional caliche will be obtained from the actual well site. If caliche does not exist or is not plentiful from the well site, the caliche will be hauled from a BLM approved caliche pit. Any additional construction materials will be purchased from contractors.
 - 4) It will be necessary to run electric power if this well is productive. Power will be provided by Xcel Energy and they will submit a separate plan and ROW for service to the well location.
 - 5) If the well is productive, rehabilitation plans will include the following:
 - The original topsoil from the well site will be returned to the location, and the site will be re-contoured as close as possible to the original site.

5. Location and Type of Water Supply:

The well will be drilled with combination brine and fresh water mud system as outlined in the drilling program. The water will be obtained from commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown in Exhibit #2. If a commercial fresh water source is nearby, fast line may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

6. Source of Construction Materials and Location “Turn-Over” Procedure:

Obtaining caliche: One primary way of obtaining caliche to build locations and roads will be by “turning over” the location. This means, caliche will be obtained from the actual well site. A caliche permit will be obtained from BLM prior to obtaining caliche. 2400 cubic yards is the maximum amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel:

- A. The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.
- B. An approximate 160' X 160' area is used within the proposed well site to remove caliche.
- C. Subsoil is removed and stockpiled within the surveyed well pad.
- D. When caliche is found, material will be stock piled within the pad site to build the location and road.
- E. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.
- F. Once well is drilled, the stock piled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced.
- G. Neither caliche, nor subsoil will be stock piled outside of the well pad. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat.

In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or land.

7. Methods of Handling Water Disposal:

- A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to an NMOCD approved disposal site.
- B. Drilling fluids will be contained in steel mud pits.
- C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.

- D. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. No toxic waste or hazardous chemicals will be produced by this operation.
- E. Human waste and grey water will need to be properly contained and disposed of. Proper disposal and elimination of waste and grey water may include but are not limited to portable septic systems and/or portable waste gathering systems (i.e. portable toilets).
- F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. In the event of a dry hole only a dry hole marker will remain.

8. Ancillary Facilities:

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

9. Well Site Layout:

- A. The drill pad layout, with elevations staked by Harcrow Surveying, is shown in the Elevation Plat. Dimensions of the pad and pits are shown on the Rig Layout. V door direction is East. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required.
- B. The Rig Layout Closed-Loop exhibit shows the proposed orientation of closed loop system and access road. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.

10. Plans for Restoration of the Surface:

- A. Interim Reclamation will take place after the well has been completed. The pad will be downsized by reclaiming the areas not needed for production operations. The portions of the pad that are not needed for production operations will be re-contoured to its original state as much as possible. The caliche that is removed will be reused to either build another pad site or for road repairs within the lease. The stockpiled topsoil will then be spread out reclaimed area and reseeded with a BLM approved seed mixture. In the event that the well must be worked over or maintained, it may be necessary to drive, park, and/or operate machinery on reclaimed land. This area will be repaired or reclaimed after work is complete.

- B. Final Reclamation: Upon plugging and abandoning the well all caliche for well pad and lease road will be removed and surface will be recountoured to reflect its surroundings as much as possible. Caliche will be recycled for road repair or reused for another well pad within the lease. If any topsoil remains, it will be spread out and the area will be re-seeded with a BLM approved mixture and re-vegetated as per BLM orders.

11. Surface Ownership:

- A. The surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is multiple uses with the primary uses of the region for grazing of livestock and the production of oil and gas.
- B. The surface tenant is Richardson Cattle Co., P O Box 487, Carlsbad, NM 88221.
- C. The proposed road routes and surface location will be restored as directed by the BLM.

12. Other Information:

- A. The area around the well site is grassland and the topsoil is sandy. The vegetation is moderately sparse with native prairie grasses, some mesquite and shinnery oak. No wildlife was observed but it is likely that mule deer, rabbits, coyotes and rodents traverse the area.
- B. There is no permanent or live water in the immediate area.
- C. There are no dwellings within 2 miles of this location.
- D. If needed, a Cultural Resources Examination is being prepared by Southern New Mexico Archaeological Services, Inc. P.O. Box 1, Bent New Mexico, 88314, phone # 505-671-4797 and the results will be forwarded to your office in the near future. Otherwise, **COG will be participating in the Permian Basin MOA Program.**

13. Bond Coverage:

Bond Coverage is Statewide Bonds # NMB000215 and NMB000740

Surface Use Plan
COG Operating, LLC
Crazy Horse Federal #1H
SL: 330' FNL & 190' FWL Lot #1
Section 18, T19S, R32E
BHL: 380' FNL & 330' FEL UL A
Section 18, T19S, R32E
Lea County, New Mexico

14. Lessee's and Operator's Representative:

The COG Operating LLC representative responsible for assuring compliance with the surface use plan is as follows:

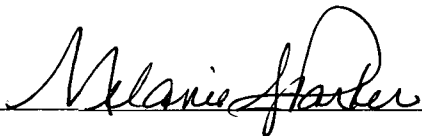
Sheryl Baker
Drilling Superintendent
COG Operating LLC
2208 West Main Street
Artesia, NM 88210
Phone (575) 748-6940 (office)
(432) 934-1873 (cell)

Ray Peterson
Drilling Manager
COG Operating LLC
One Concho Center
600 W Illinois Ave
Midland, TX 79701
Phone (432) 685-4304 (office)
(432) 818-2254 (business)

*Surface Use Plan
COG Operating, LLC
Crazy Horse Federal #1H
SL: 330' FNL & 190' FWL Lot #1
Section 18, T19S, R32E
BHL: 380' FNL & 330' FEL UL A
Section 18, T19S, R32E
Lea County, New Mexico*

OPERATOR CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or COG Operating, LLC, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 1st day of August, 2013.

Signed: _____

Printed Name: Melanie J. Parker

Position: Regulatory Coordinator

Address: 2208 W. Main Street, Artesia, NM 88210

Telephone: (575) 748-6940

Field Representative (if not above signatory): Rand French

E-mail: mparker@concho.com

*Surface Use Plan
COG Operating, LLC
Crazy Horse Federal #1H
SL: 330' FNL & 190' FWL Lot #1
Section 18, T19S, R32E
BHL: 380' FNL & 330' FEL UL A
Section 18, T19S, R32E
Lea County, New Mexico*

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Date: August 1, 2013

Lease #: NMNM077053
Crazy Horse Federal #1H

Legal Description: Sec. 18 – T19S – R32E
Lea County, New Mexico

Formation(s): Bone Spring

Bond Coverage: Statewide

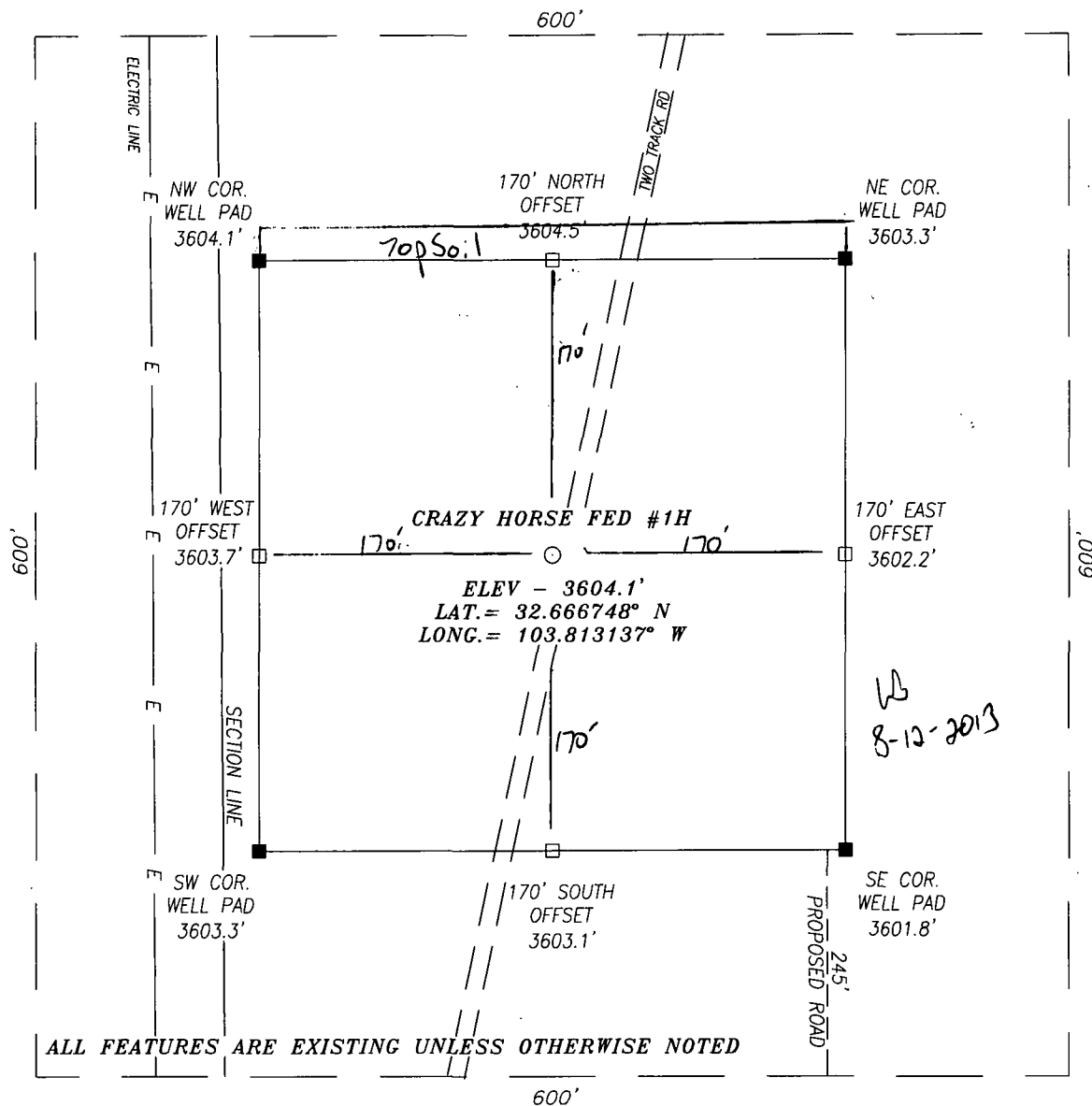
BLM Bond File #: NMB000740 & NMB000215

COG OPERATING LLC



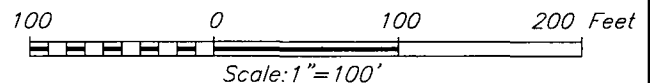
Mayte Reyes
Regulatory Analyst

NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF MALJAMAR RD (CR #126A) AND DRY LAKE RD GO APPROX. 0.2 MILES WEST ALONG DRY LAKE RD TURN RIGHT (NORTH) ONTO A CALICHE RD GO APPROX. 0.4 MILES TURN LEFT (WEST) GO APPROX. 0.7 MILES TURN RIGHT (NORTH) GO APPROX. 0.4 MILES TURN LEFT (WEST) ONTO TWO TRACK RD GO APPROX. 455 FEET AND PROPOSED WELL IS APPROX. 450 FEET NORTH.



HARCROW SURVEYING, LLC

1107 WATSON, ARTESIA, N.M. 88210
PH: (575) 513-2570 FAX: (575) 746-2158
chad_harcrow77@yahoo.com



COG OPERATING, LLC

CRAZY HORSE FED #1H WELL
LOCATED 330 FEET FROM THE NORTH LINE
AND 190 FEET FROM THE WEST LINE OF SECTION 18,
TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO

SURVEY DATE: 04/03/2013

PAGE: 1 OF 1

DRAFTING DATE: 04/05/2013

APPROVED BY: CH

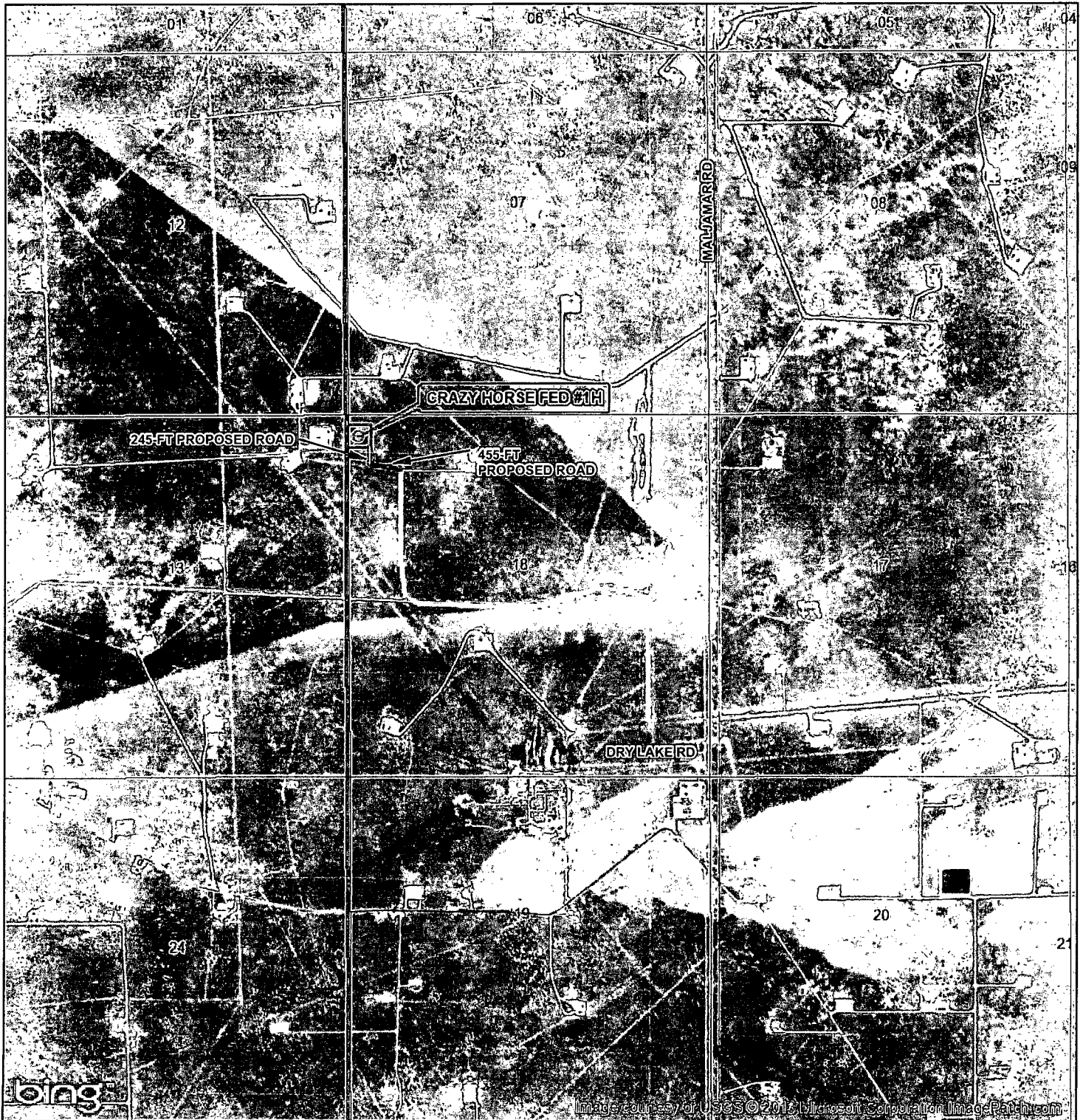
DRAWN BY: VD

FILE: 13-154

LOCATION VERIFICATION MAP



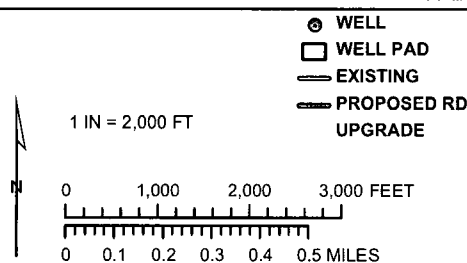
LOCATION VERIFICATION MAP



SEC. 18, TWP. 19S, RGE. 32E
 SURVEY: N.M.P.M.
 COUNTY: LEA STATE: NEW MEXICO
 DESCRIPTION: CRAZY HORSE FED #1H
 330' FNL & 190' FWL

ELEVATION: 3604.1'
 OPERATOR: COG OPERATING
 LEASE: CRAZY HORSE FEDERAL

W.O. # 13-154

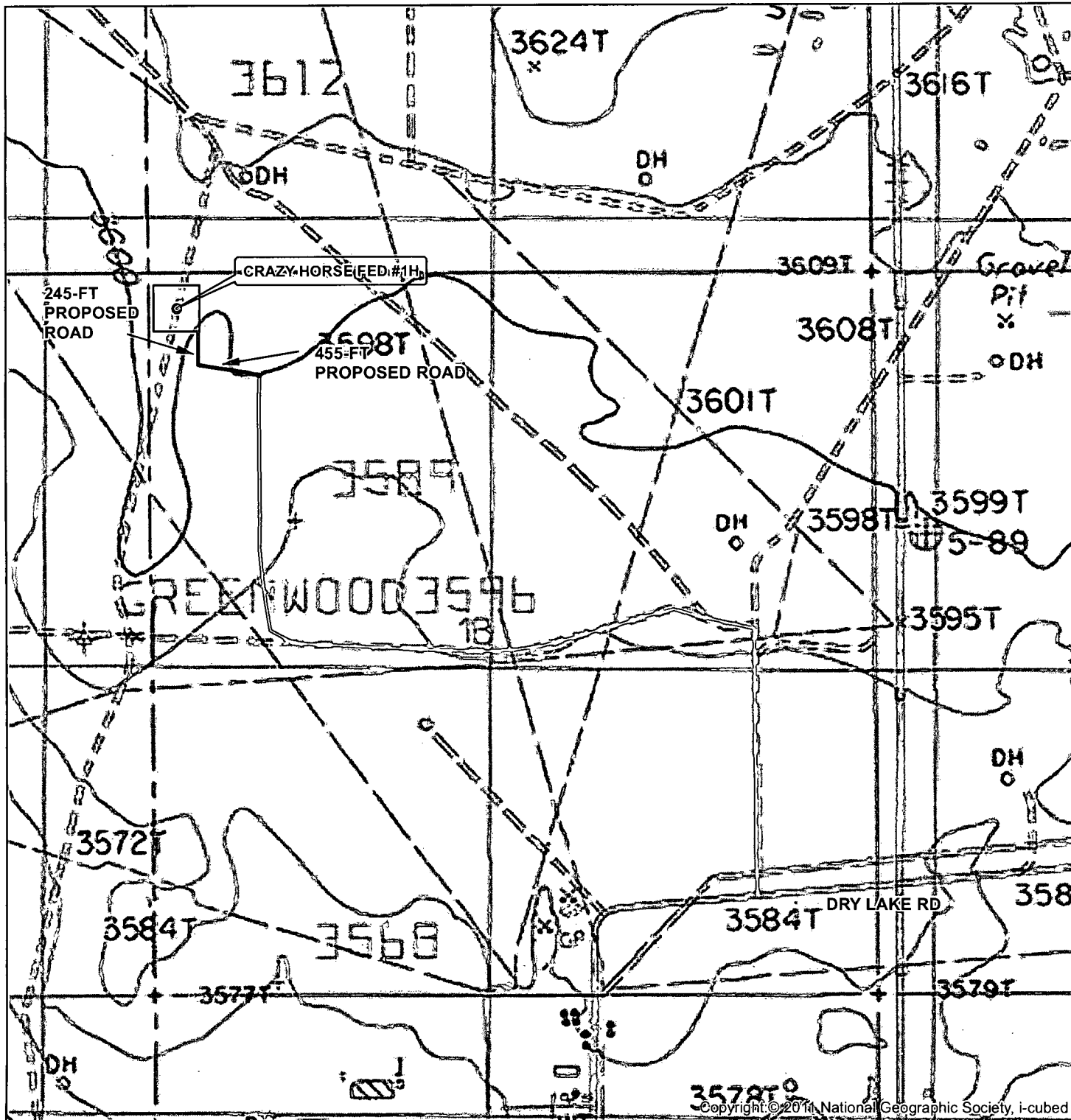


HARCROW SURVEYING, LLC
 1107 WATSON, ARTESIA N.M. 88210
 PH: (575) 513-2570 FAX: (575) 746-2158
 chad_harcrow77@yahoo.com



MAP DATE: 4/5/2013

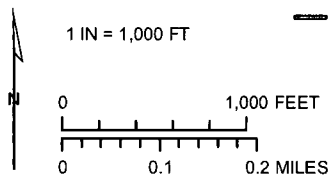
ACCESS ROAD MAP



SEC. 18, TWP. 19S, RGE. 32E
 SURVEY: N.M.P.M.
 COUNTY: LEA STATE: NEW MEXICO
 DESCRIPTION: CRAZY HORSE FED #1H
 330' FNL & 190' FWL

ELEVATION: 3604.1'
 OPERATOR: COG OPERATING
 LEASE: CRAZY HORSE FEDERAL

W.O. # 13-154



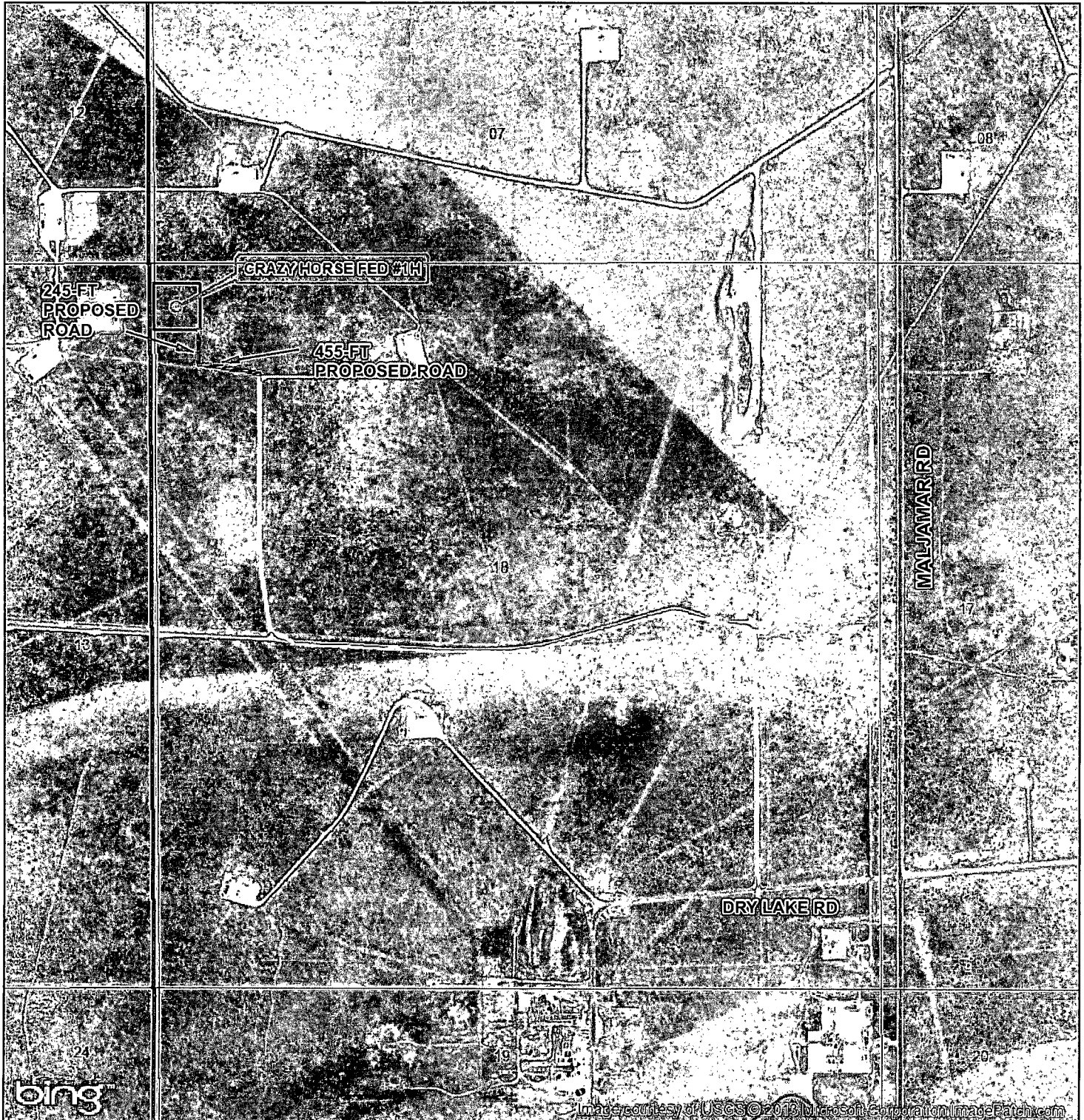
- WELL
- WELL PAD
- EXISTING
- PROPOSED RD
- UPGRADE

HARCROW SURVEYING, LLC
 1107 WATSON, ARTESIA N.M. 88210
 PH: (575) 513-2570 FAX: (575) 746-2158
 chad_harcrow77@yahoo.com



MAP DATE: 4/5/2013

ACCESS ROAD MAP



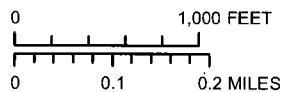
SEC. 18, TWP. 19S, RGE. 32E
 SURVEY: N.M.P.M.
 COUNTY: LEA STATE: NEW MEXICO
 DESCRIPTION: CRAZY HORSE FED #1H
 330' FNL & 190' FWL

ELEVATION: 3604.1'
 OPERATOR: COG OPERATING
 LEASE: CRAZY HORSE FEDERAL

W.O. # 13-154



1 IN = 1,000 FT



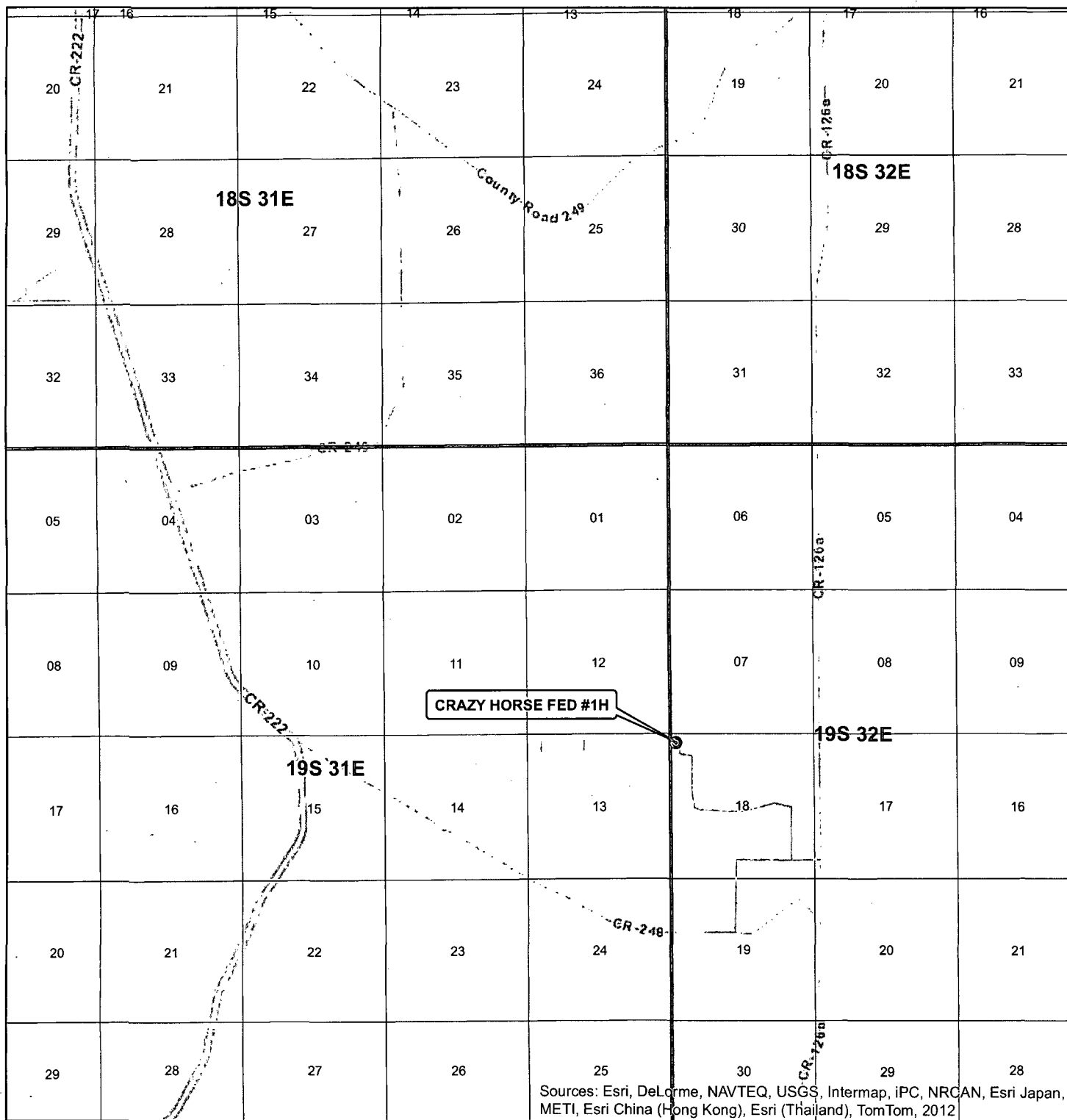
- WELL
- WELL PAD
- EXISTING
- PROPOSED RD
- UPGRADE

HARCROW SURVEYING, LLC
 1107 WATSON, ARTESIA N.M. 88210
 PH: (575) 513-2370 FAX: (575) 746-2158
 chad_harcrow77@yahoo.com



MAP DATE: 4/5/2013

VICINITY MAP



Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012

SEC. 18, TWP. 19S, RGE. 32E
 SURVEY: N.M.P.M.
 COUNTY: LEA STATE: NEW MEXICO
 DESCRIPTION: CRAZY HORSE FED #1H
 330' FNL & 190' FWL

ELEVATION: 3604.1'
 OPERATOR: COG OPERATING
 LEASE: CRAZY HORSE FEDERAL

W.O. # 13-154



1 IN = 5,000 FT

0 0.5 1 1.5 MILES

WELL

Proposed Road

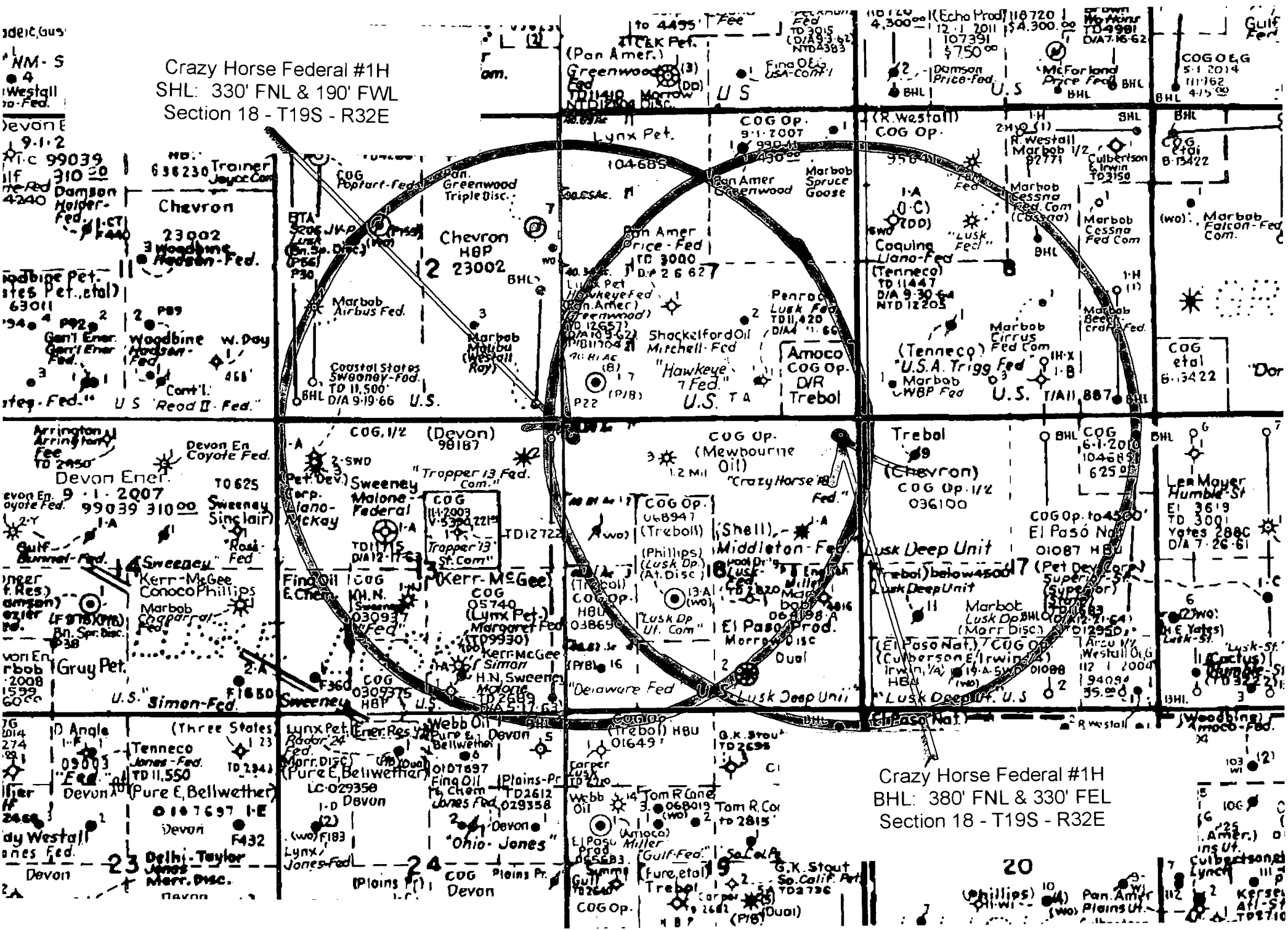
TOWNSHIP

SECTION

HARCROW SURVEYING, LLC
 1107 WATSON, ARTESIA N.M. 88210
 PH: (575) 513-2570 FAX: (575) 746-2158
 chad_harcrow77@yahoo.com



MAP DATE: 4/5/2013



Crazy Horse Federal #1H
SHL: 330' FNL & 190' FWL
Section 18 - T19S - R32E

Crazy Horse Federal #1H
BHL: 380' FNL & 330' FEL
Section 18 - T19S - R32E