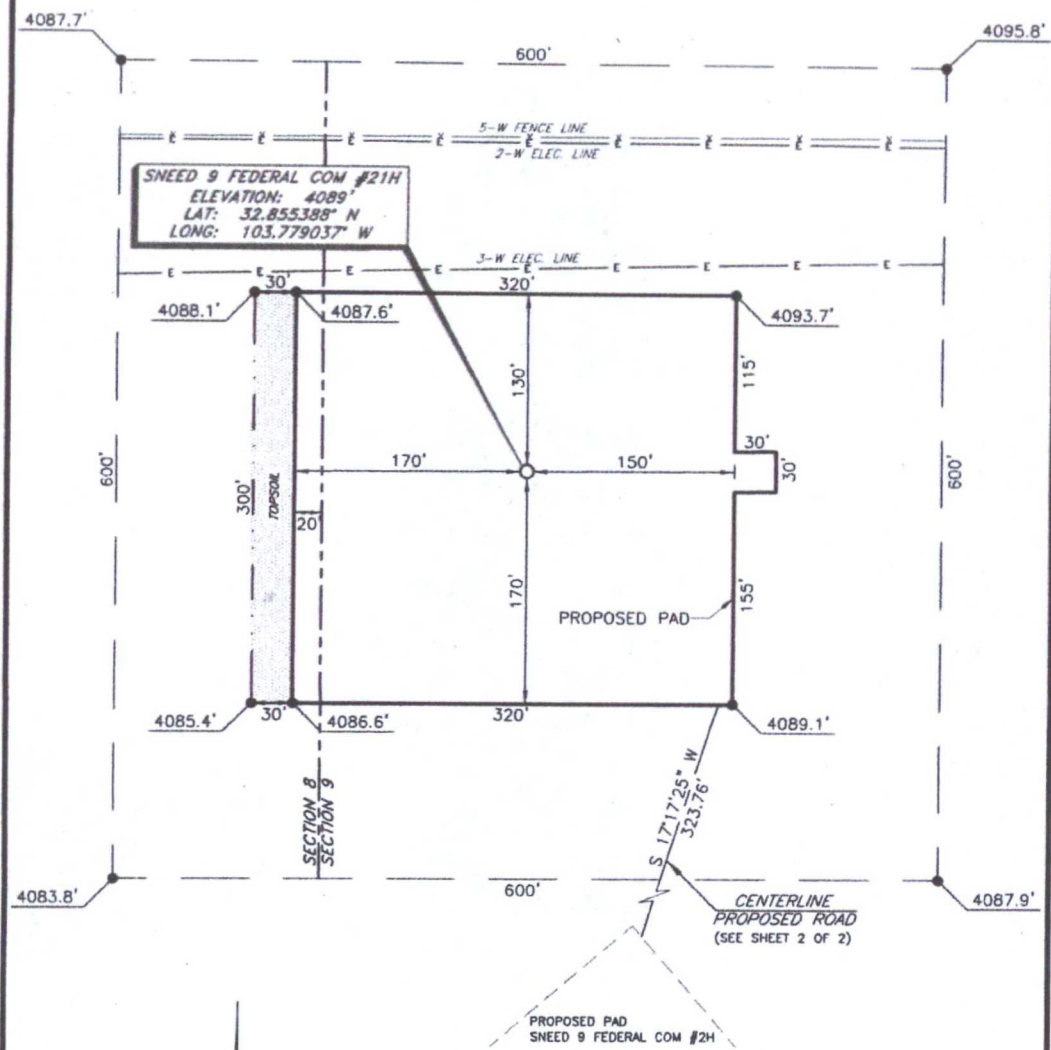


30-025-41489

# COG OPERATING, LLC

Sneed 9 Federal Com #21H  
(330' FNL & 150' FWL)  
Section 9, T-17-S, R-32-E,  
N. M. P. M., Lea Co., New Mexico



**DIRECTIONS TO LOCATION**  
From U.S. Hwy. #82 and L-126 (Maljamar Rd.):  
Go South on L-126 (Maljamar Rd.) approx. 0.6 mile.  
Turn right on a lease road and go Southwest approx. 0.8 mile.  
Turn right and go North approx. 0.6 mile to the proposed road.  
Follow proposed road 0.15 mile West then continue following survey North for approx. 0.4 mile to this location.

SCALE: 1" = 100'  
0 50 100  
BEARINGS ARE  
MAG. 27° NW EAST  
DISTANCES ARE  
GROUND.

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PROSPERITY CONSULTANTS, LLC				SCALE: 1" = 100'	
NO.	REVISION	DATE		DATE: 5/31/13	
JOB NO.: LS130060				SURVEYED BY: GB/SM	
DWG. NO.: 130060PAD				DRAWN BY: AF	
2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664				APPROVED BY: LWB	
(512) 992-2087 / (512) 251-2518				SHEET : 1 OF 2	

# VICINITY MAP

NOT TO SCALE



**SECTION 9, TWP. 17 SOUTH, RGE. 32 EAST,  
N. M. P. M., LEA COUNTY, NEW MEXICO**

OPERATOR: COG Operating, LLC  
LEASE: Sneed 9 Federal Com  
WELL NO.: 21H

LOCATION: 330' FNL & 150' FWL  
ELEVATION: 4089'

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NO.	REVISION	DATE
JOB NO.: LS130060		
DWG. NO.: 130060VM		

PROSPERITY CONSULTANTS, LLC



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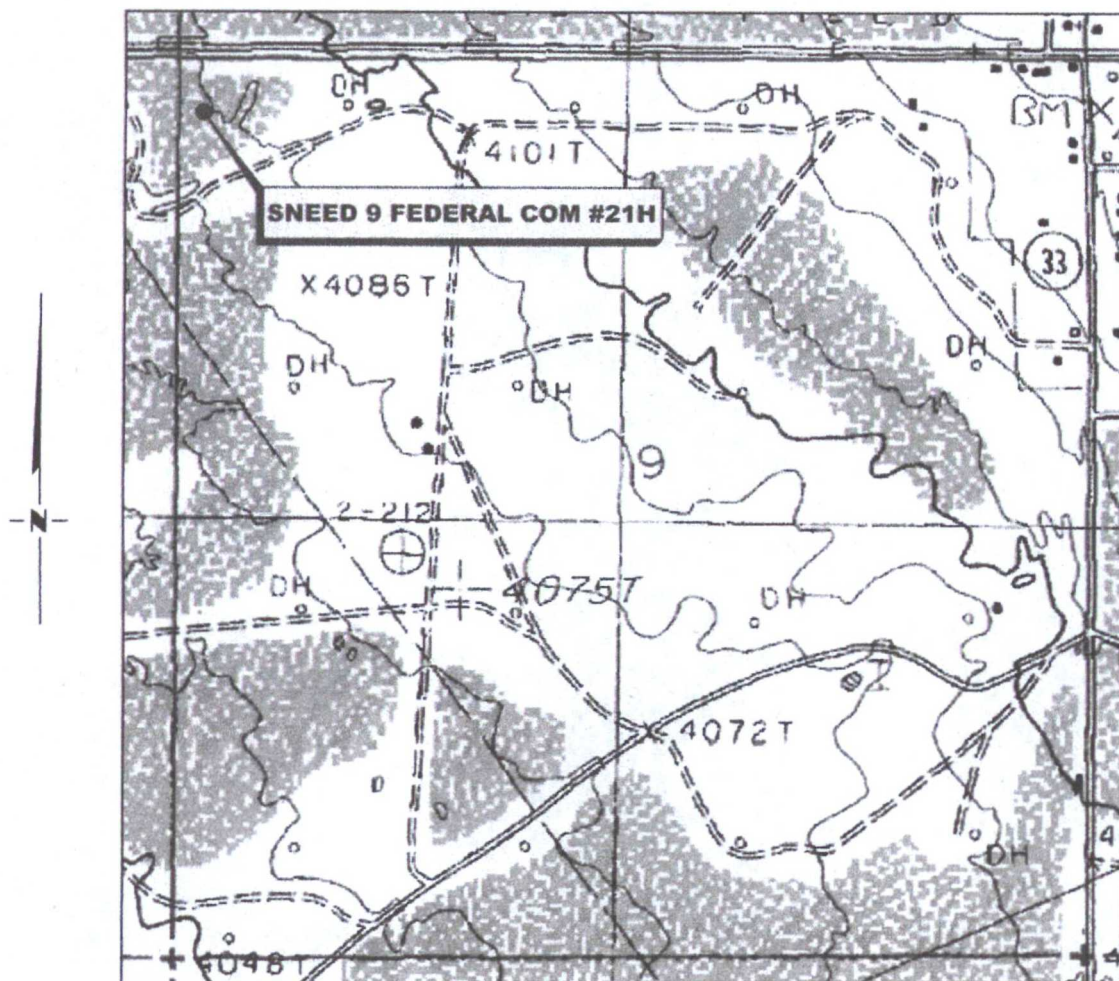
o (512) 992-2087 f (512) 251-2518

SCALE: N.T.S.
DATE: 5/31/13
SURVEYED BY: GB/SM
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1



# LOCATION VERIFICATION MAP

NOT TO SCALE



SECTION 9, TWP. 17 SOUTH, RGE. 32 EAST,  
N. M. P. M., LEA COUNTY, NEW MEXICO

OPERATOR: COG Operating, LLC  
LEASE: Sneed 9 Federal Com  
WELL NO.: 21H  
ELEVATION: 4089'

LOCATION: 330' FNL & 150' FWL  
CONTOUR INTERVAL: 10'  
USGS TOPO. SOURCE MAP:  
Maljamar, NM (Prov. Ed. 1985)

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NO.	REVISION	DATE
JOB NO.: LS130060		
DWG. NO.: 130060LVM		

PROSPERITY CONSULTANTS, LLC

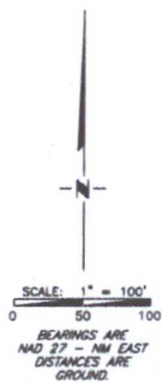
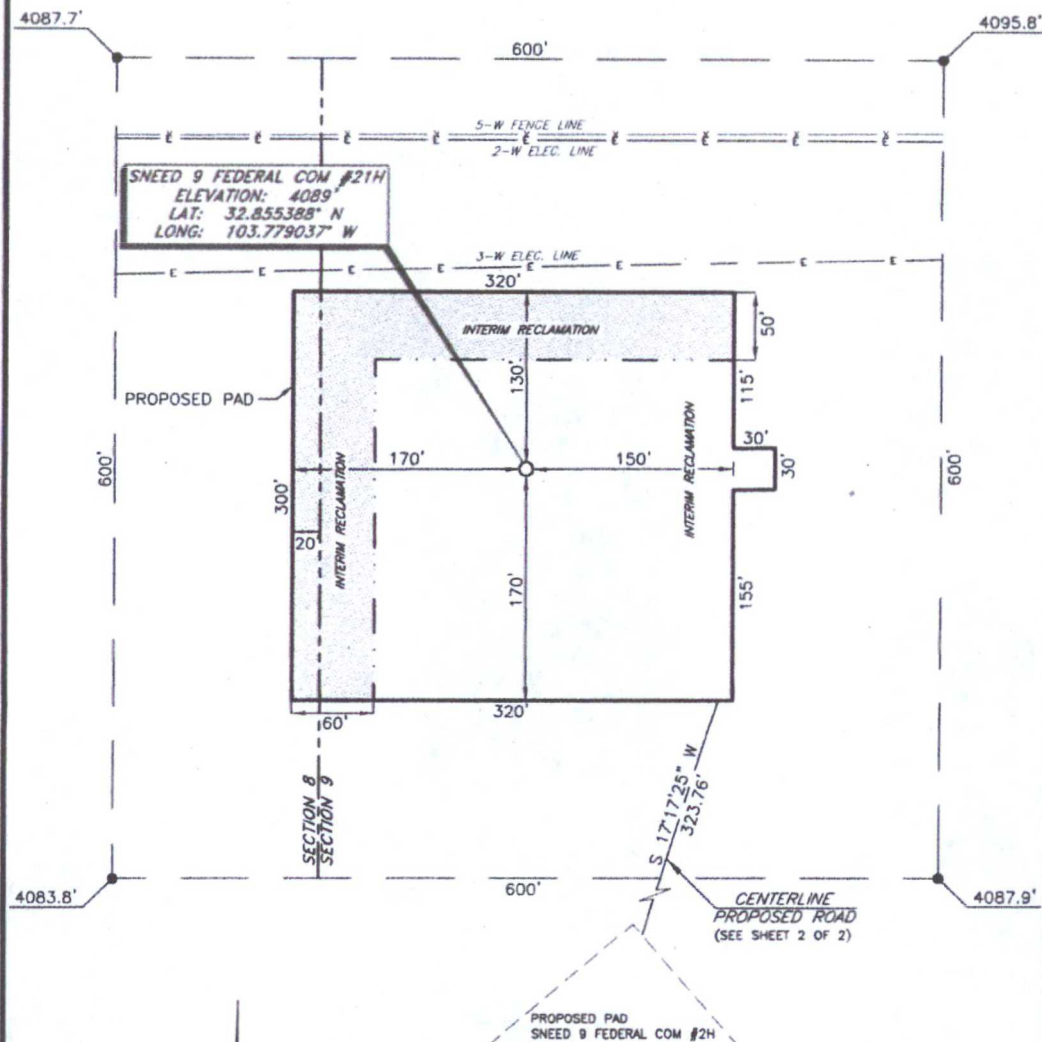


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o (512) 992-2087 f (512) 251-2518

SCALE: N.T.S.
DATE: 5/31/13
SURVEYED BY: GB/SM
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

**COG OPERATING, LLC**  
**Interim Reclamation**  
**Sneed 9 Federal Com #21H**  
**(330' FNL & 150' FWL)**  
**Section 9, T-17-S, R-32-E,**  
**N. M. P. M., Lea Co., New Mexico**



**DIRECTIONS TO LOCATION**

From U.S. Hwy. #82 and L-126 (Maljamar Rd.):

Go South on L-126 (Maljamar Rd.) approx. 0.6 mile.

Turn right on a lease road and go Southwest approx. 0.8 mile.

Turn right and go North approx. 0.6 mile to the proposed road.

Follow proposed road 0.15 mile West then continue following survey North for approx. 0.4 mile to this location.

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NO.	REVISION	DATE
JOB NO.:	LS130060	
DWG. NO.:	130060REC	

PROSPERITY CONSULTANTS, LLC



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o (512) 992-2087 f (512) 251-2518

SCALE: 1" = 100'
DATE: 5/31/13
SURVEYED BY: GB/SM
DRAWN BY: AF
APPROVED BY: LWB
SHEET : 1 OF 1

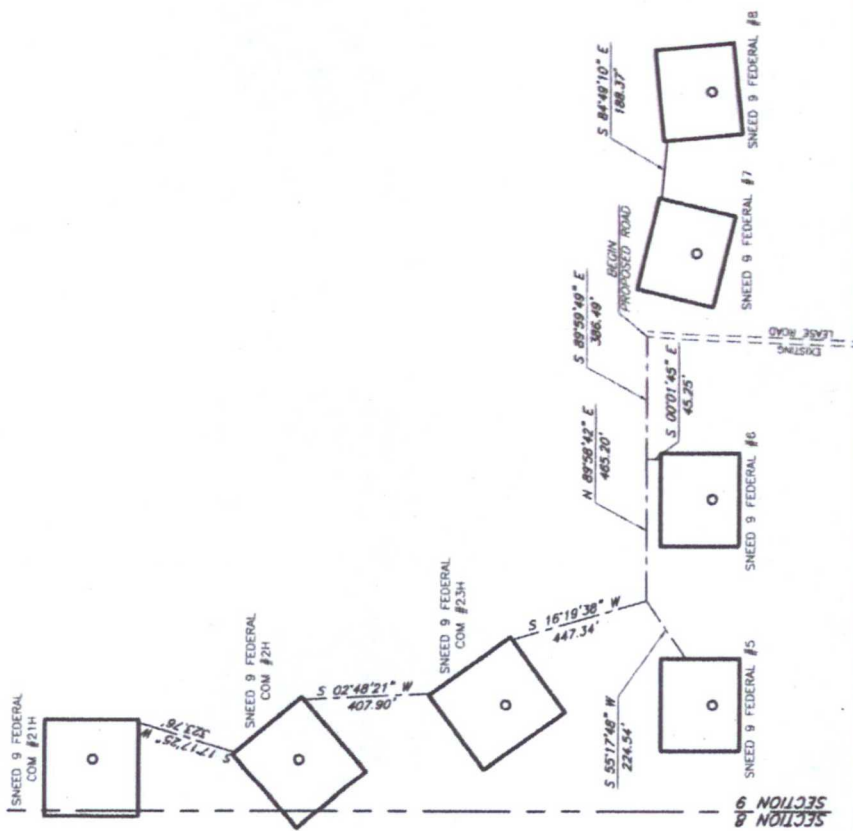


# COG OPERATING, LLC

ROAD DRAWING FOR SNEED WELLS  
Section 9, T-17-S, R-32-E,  
N. M. P. M., Lea Co., New Mexico

PRO. PK. MILE  
IN ROAD

5 4  
8 9



SECTION 9  
6 NOTICES

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NO.	REVISION	DATE
JOB NO.:	LS130060	
DWG. NO.:	130060RD	

PROSPERITY CONSULTANTS, LLC



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SCALE:	N.T.S.
DATE:	5/31/13
SURVEYED BY:	GB/SM
DRAWN BY:	AF
APPROVED BY:	LWB
SHEET :	2 OF 2

SNEED 9 FEDERAL COM #21H

COG respectfully request approval to change production casing and cement programs as follows:

## Original production casing proposal:

### OLD Casing design

Hole Size	Interval MD	OD Casing	Weight	Grade	Condition	Jt.	brst/clps/ten
8 3/4"	2290'-6223'	7"	26#	L-80	New	LT&C	1.17/1.83/3.70
8 3/4"	6223'-6981'	5 1/2"	17#	L-80	New	LT&C	1.55/1.96/3.45
7 7/8"	6981'-11108'	5 1/2"	17#	L-80	New	LT&C	1.55/1.96/3.45

## New production casing proposal:

Hole Size	Interval MD	OD Casing	Weight	Grade	Condition	Coupling	Burst	Collapse	Tension
8 3/4"	2290'-5879	7"	26#	L-80	New	LT&C	1.33	3.24	2.76
8 3/4"	5879'-6697	5 1/2"	17#	L-80	New	LT&C	1.33	2.61	3.1
7 7/8"	12288	5 1/2"	17#	L-80	New	LT&C	1.33	2.61	6.18

*Revised*

## New production cement:

### Single Stage:

500 psi							
Interval	Hole Size	Sacks	Yield (cf/sx)	Cement wt (ppg)	Wtr Required (gal/sx)	Excess (%)	Time (hrs)
0-5897	8.75	475	2.01	12.5	11.4	34	30
5879-6697	8.75	200	1.37	14	6.5	37	12
6697-12288	7.875	1300	1.37	14	6.5	37	12

### Multi-stage:

500 psi							
Interval	Hole Size	Sacks	Yield (cf/sx)	Cement wt (ppg)	Wtr Required (gal/sx)	Excess (%)	Time (hrs)
0-3676	8.75	225	2.01	12.5	11.4	30	30
3676-4082	8.75	150	1.02	16.8	4	143	6
4082-5879	8.75	175	2.01	12.5	11.4	30	30
5879-6697	8.75	200	1.37	14	6.5	37	12
6697-12288	7.875	1300	1.37	14	6.5	37	12

This sundry was necessary because another ¼" mile was added to EOL.

The casing changes will help us install larger pumping equipment and L-80 has better corrosion resistance than P110.