Susana Martinez Governor

David Martin Cabinet Secretary

Brett F. Woods, Ph.D. Deputy Cabinet Secretary David R. Catanach **Division Director** Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 2-28-14 Well information: Operator V: Sion Energy, Well Name and Number λ avaio 18 #61 API#<u>30-045-35572</u>, Section 7, Township <u>29</u> (N)S, Range <u>16</u> ENV

Conditions of Approval:

(See the below checked and handwritten conditions)

★ Notify Aztec OCD 24hrs prior to casing & cement.

- Hold C-104 for directional survey & "As Drilled" Plat 0
- Hold C-104 for NSL, NSP, DHC 0
- Spacing rule violation. Operator must follow up with change of status notification on other well to be shut \cap in or abandoned

Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the X following as applicable:

- A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
- A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A ٠
- A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- Once the well is spud, to prevent ground water contamination through whole or partial conduits from the 0 surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string

Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84

Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

NMOCD Approved by Signature

<u>1-7-2015</u> Date

4	ML CONS. DIV DIST. 3					
Form 3160-3 (March 2012)	DEC 3 0 2014 UNITED STATE DEPARTMENT OF THE BUREAU OF LAND MA	es JU INTERIOR NAGEMENT Farming	L 02 20 L 02 Kon Field	0MB 0MB Expires 5. Lease Serial No. -1-89-IND-58	1 APPROVED No. 1004-0137 October 31, 2014	
APPLICA	TION FOR PERMIT TO	D DRILL OR REENTER	Lénd Mun	Alloter NAVAJO NATION	e or Tribe Name	
la. Type of work: DRI	LL REEN	TER		7 If Unit or CA Age N/A	eement, Name and No.	
lb. Type of Well:		Single Zone	ultiple Zone	8. Lease Name and NAVAJO 18 #61	Well No.	
	ENERGY GROUP LLC			9. API Well No. 30-045- 355	572	
3a. Address 39 OLD RIDGE DANBURY CT		3b. Phone No. (include area code, (203) 837-2538) ·	10. Field and Pool, or HOGBACK DAKC	• •	
At surface 777' FSL & 12		any State requirements.*)		11. Sec., T. R. M. or SWSW 7-29N-16V	Blk.and Survey or Are N	
At proposed prod. zone SA 14. Distance in miles and direction 4 AIR MILES SW OF WAT	n from nearest town or post office*			12. County or Parish SAN JUAN	13. State NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line)	363'	16. No. of acres in lease 4,800	17. Spacin SWSW	ng Unit dedicated to this	well	
 Distance from proposed locati to nearest well, drilling, comp applied for, on this lease, ft. 		19. Proposed Depth 750'	20. BLM/ 015037	BIA Bond No. on file* 275		
21. Elevations (Show whether D 5,052' UNGRADED	F, KDB, RT, GL, etc.)	22. Approximate date work will 06/01/2014	l start*	23. Estimated duration 1 WEEK		
		24. Attachments				
SUPO must be filed with the a 25. Signature	ed surveyor. cation is on National Forest Syste ppropriate Forest Service Office).	m Lands, the Item 20 abov 5. Operator cer 6. Such other s BLM. Name (Printed/Typed) BRIAN WOOD (re). tification site specific inf PHONE: 505	······		
CONSULTANT	TM L	(Name (Printed/Typed)	FAX: 505 46	6-9682)	Date	
ïtle	Mankie ley) Office \mathcal{F}	<u> </u>	·	12/24/1	
Application approval does not wa onduct operations thereon. Conditions of approval, if any, are		olds legal or equitable title to those r		bject lease which would	entitle the applicant to	
itle 18 U.S.C. Section 1001 and Tit tates any false, fictitious or fraud	ilent statements or representations a	retime (for an person (knowingly a) as to any matter within its jurisdiction	LESSEE /			
(Continued on page 2) DRILLING OPERATIONS HORIZED ARE SUBJECT 1 IPLIANCE WITH ATTACHE ENERAL REQUIREMENTS	OPERATO AUTHORI ON FEDER	IN FROM OBTAINING AT ZATION REQUIRED FOR RAL AND INDIAN LAND	NY OTHER R OPERAT		Subject to achain all EVIAN pursuant 3 and appeal 3 CFR 3165.4	

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District I 1625 N. French Phone (575)393 District II 811 S. First St., Phone (575)748 District III 1000 Rio Brazo Phone (505)334 District IV 1229 S. St. Fran Phone (505)476	-6161 Fax (57 Artesia, NM 1 -1283 Fax (57 s Rd., Artec, 5 -6178 Fax (50 cis Dr.; Santa	5)393-0720 88210 5)748-9720 NM 87410 (5)334-6170 Fe, NM 87505	0	rgy, Miner IL CON 1220 Sa	als & Min SERVA South St. nta Fe, NI	ew Mexic ing Resour ATION E Francis Dr M 87505 CREAGE DE	ices Depart	NECE JUL 02	Form C - 102 Revised August 1, 2011 Submit one copy to appropriate District Office
30-045-	1 API Num 355			² Pool Code 32680			^е нбо	back-Dak	isia Office Staragemen.
⁺ Property 310	y Code 16 64				Property Nan	_			⁶ Weil Number 61
⁷ OGRI 2809		Operator Humo				⁹ Elevation 5052'			
	·				¹⁰ Surface L	ocation		<u></u>	
Ul. or Lot	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
M	7	29 N.	16 W.		777'	SOUTH	1256'	WEST	SAN JUAN
¹¹ Bottom Hole Location If Different From Surface									
UL or Lot	Section	Township	Range	Lot Idn.		North/South line		East/West line	County
¹² Dedicated A 40	Acres ¹³ Join	nt or Infill ¹⁴ (Consolidation C	Code IN C	order No.	·		· · · · · · · · · · · · · · · · · · ·	

No allowable will assigned to this completion until all interests have been consolidated or a non standard unit has been approved by the division.



Drilling Program

1. ESTIMATED FORMATION TOPS

Formation Name	<u>GL Depth</u>	KB Depth	Elevation
Mancos shale	0'	5'	+5,052'
Juana Lopez	216'	221'	+4,836'
Greenhorn limestone	637'	642'	+4,415'
Graneros shale	682'	687'	+4,370'
Dakota sandstone	722'	727'	+4,330'
Total Depth (TD)	750'	755'	+4,302'

2. NOTABLE ZONES

<u>Gas & Oil Zone</u>	Water Zone	Other Mineral Zone
Dakota	N/A	N/A

Water zones will be protected with casing, cement, and weighted mud. Fresh water found while drilling will be recorded.

3. PRESSURE CONTROL

Maximum expected bottom hole pressure is ≈ 200 psi. A diagram of a typical 2,000-psi Hydril bladder type BOP system is on Page 2. System will include an upper Kelly cock valve with handle available and a safety valve and subs to fit all in use strings. All checks of the BOP stack and equipment will be noted on the daily report. Vision is requesting a variance from 2 chokes due to the shallow depth, low formation pressure, and previous drilling experience in this area has shown no formation gas.



surface pipe to hold cement in the annulus. Cement will be circulated to the surface and will be topped off with Type III neat as needed.

Production casing will be cemented to surface with 60% excess. Casing shoe will be placed on the bottom joint with a float collar placed 1 joint above the casing shoe joint. Twenty barrels of fresh water will be circulated ahead of the cement. A single stage of 40 sacks (117 cubic feet) of premium light with FM HS will be mixed at 3.26 cubic feet per sack and 12.5 pounds per gallon. W. O. C. = 12 hours

Centralizers will be placed on the shoe joint, before and after the float collar, and every third joint to the surface casing.

Cr	Collapse							
Burst	Yield * 80%							
Mud Weight	9.5		······					
Constant	0.052						1	
TVD	850	Production Casing Surface						
TVD	200	Casing						
		Size	Grade	weight	Cr	Yield	Yield %	@ 80% Yield
Casing		4.5	K-55	10.5	4010	4790	80%	3832
		7	K-55	20	2270	3740	80%	2992
Formula	CR/(constant*TVD*Wm) Pass if greater than 1.25							
Production			9.549892832	>	1.25		PASS	
Surface			22.9757085	>	1.25		PASS	



5. MUD PROGRAM

Surface casing hole will be drilled with fresh water. Production casing hole will be drilled with a fresh polymer mud. Weighting material will be drill solids or, if needed, barite. Maximum expected mud weight is 9.5 pounds per gallon. Sufficient material to maintain mud properties, control lost circulation, and contain a well control problem will be available at the well while drilling.

6. <u>CORES, TESTS, & LOGS</u>

No cores, tests, or logs are planned.

7. DOWN HOLE CONDITIONS

No abnormal temperature, pressure, or H2S are expected. Maximum bottom, hole pressure will be \approx 200-psi.

8. <u>MISCELLANEOUS</u>

Anticipated spud date is upon approval. It is expected it will take \approx 4 days to drill the well and \approx 2 days to complete the well.

Once the top of the Dakota formation is reached, then production casing will be set. We will then circulate the hole once the cementing is done and set for 12 hours. We will nipple up mud cross and B.O.P with mate up flange from tubing head. We will pick up $3-\frac{3}{4}$ inch rock drill bit with production string $2-\frac{3}{8}$ ", J-55 tubing, and SN, and drill through float collar, cement and 3 to 4 feet into Dakota formation until good oil show back to pit. Heated CO₂ vapor will be used at this point for drilling to keep air and water off the formation.



PAGE 6

Vision Energy Group LLC Navajo 18 #61 777' FSL & 1256' FWL Sec. 7, T. 29 N., R. 16 W. San Juan County, New Mexico

3. EXISTING WELLS (See PAGE 11)

Ten oil wells, 1 disposal well, 1 oil well that is being completed, and 35 plugged wells are within a mile radius. There are no gas, water, or injection wells within a mile.

4. PROPOSED PRODUCTION FACILITIES (See PAGES 12 & 13)

A 266.65' long power line and a 266.65' long \approx 2" O. D. poly pipeline will be buried 36" deep in the same trench northeast along the new road to Vision's existing buried pipeline and power line system at the Navajo 18 #55 well.

5. WATER SUPPLY

Water will be trucked from Waterflow or Kirtland.

6. CONSTRUCTION MATERIALS & METHODS

NM One Call (1-800-321-ALERT) will be called \geq 72 hours before construction starts. Top 6" of soil will be piled south of the pad and separate from the pit subsoil. Slopes will be no steeper than 3 to 1. A diversion ditch will be cut on the south and west sides of the pad and south of the soil piles.

7. WASTE DISPOSAL

A \geq 20 mil plastic liner will be installed in the reserve pit. The pit will be fenced sheep tight on 3 sides with woven wire fence topped with barbed wire. The fourth side will be fenced once the rig moves off. The fence will be kept in good repair while the pit dries. Once dry, pit contents will be buried in place.





4. CASING & CEMENT

Hole O. D.	Casing O. D.	#/foot	Grade	Threads	Age	Depth Set
8.75"	7"	20	K-55	LC	New	200'
6.25"	4.5"	10.5	K-55	LC	New	750'

Surface casing will be cemented to the surface with 60% excess. Will use 36 sacks (49.32 cubic feet) Type III or equivalent + additives mixed at 1.37 cubic feet per sack and 14.6 pounds per gallon. Three centralizers will be evenly spaced.

W. O. C. = 12 hours. Casing will be pressure tested to 600-psi for 30-minutes. A notched 7" collar will be used as the casing shoe. Eighty psi will be held on the

